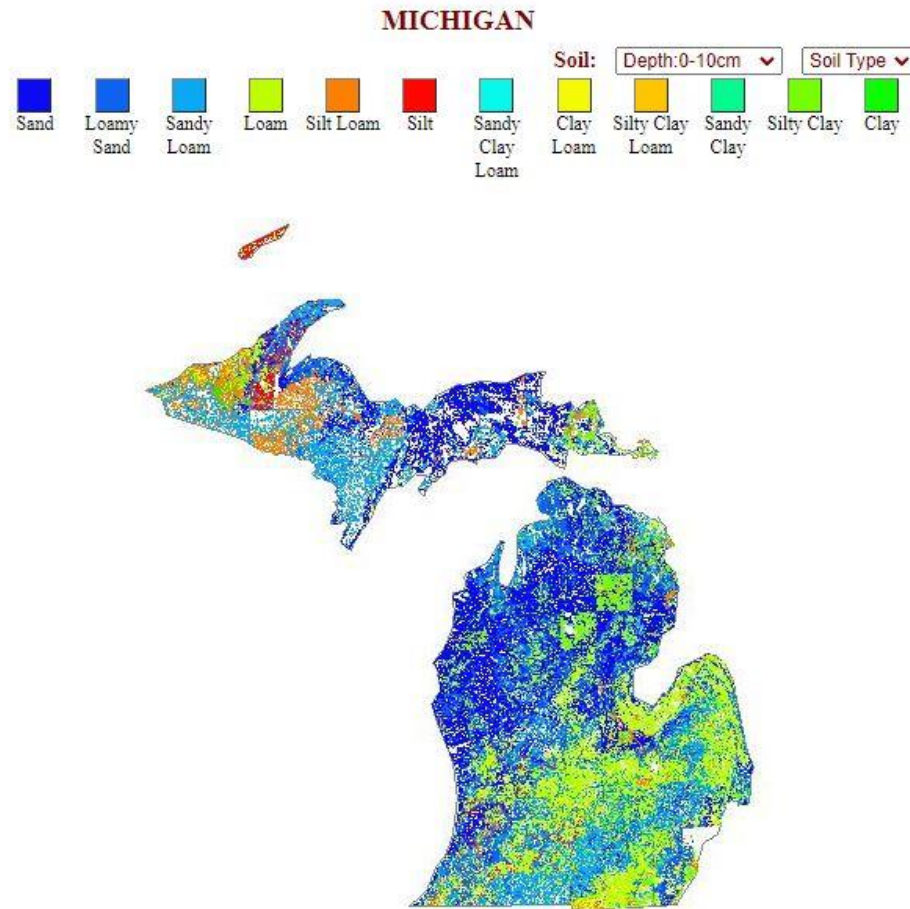


Railroad Logging in Manistee County and a Technique for Mapping the Abandoned Lines

James S. Hannum, M.D.

Types of Soil in Michigan



Original Forest Cover



The Pine Belt in MN and WI



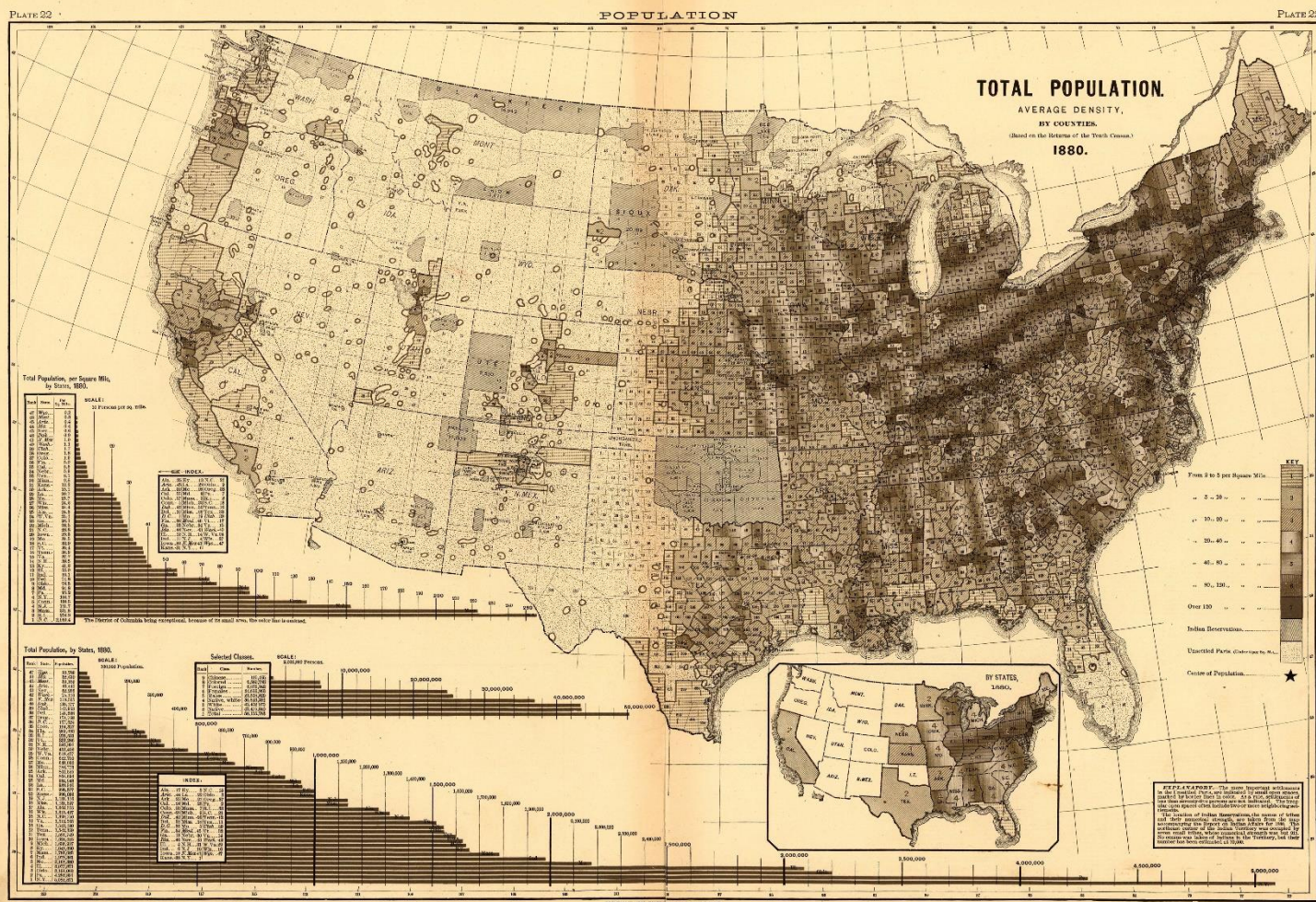
Green=White Pine in Ontario



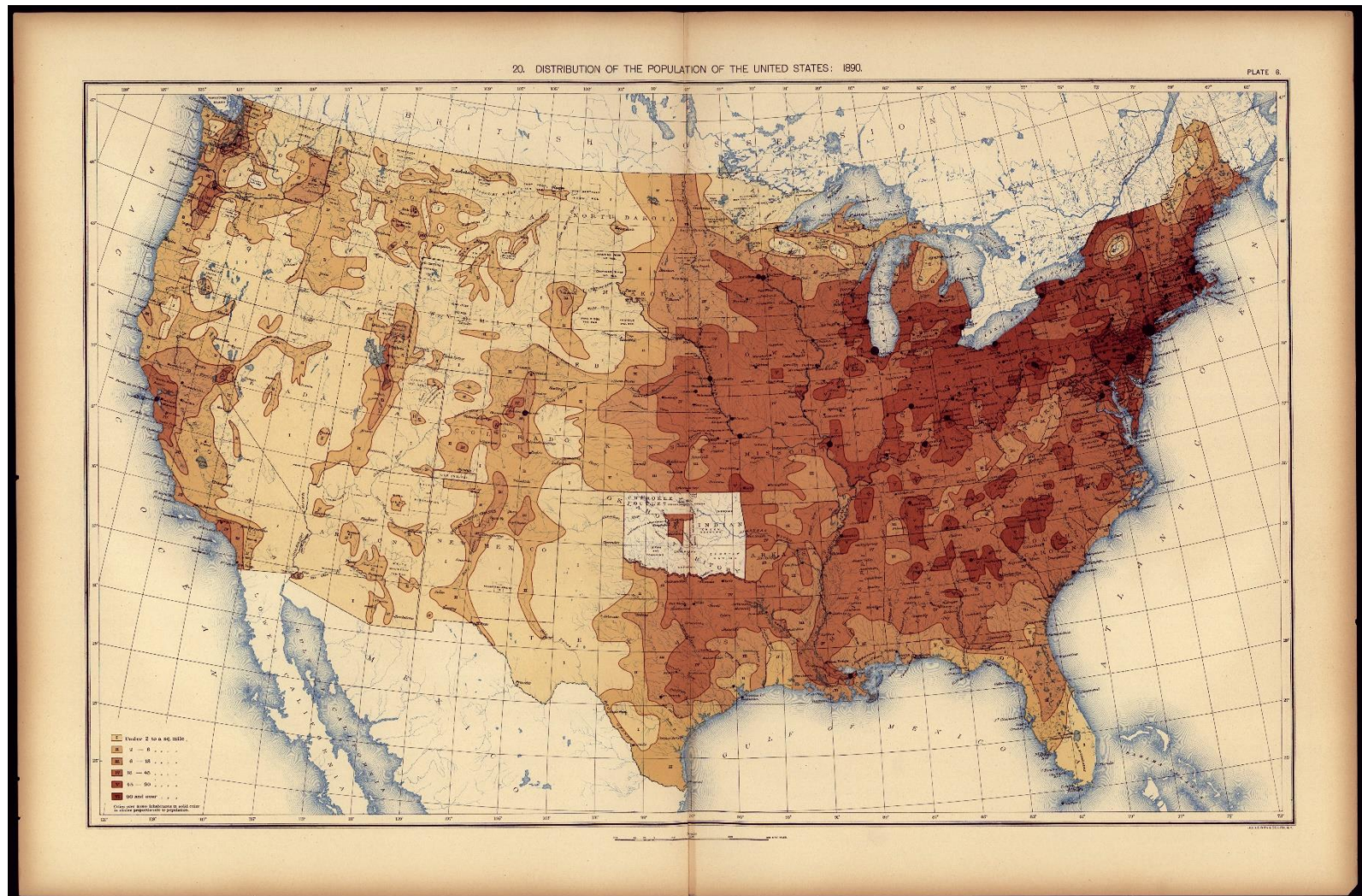
1870 Population Density



1880 Population Density

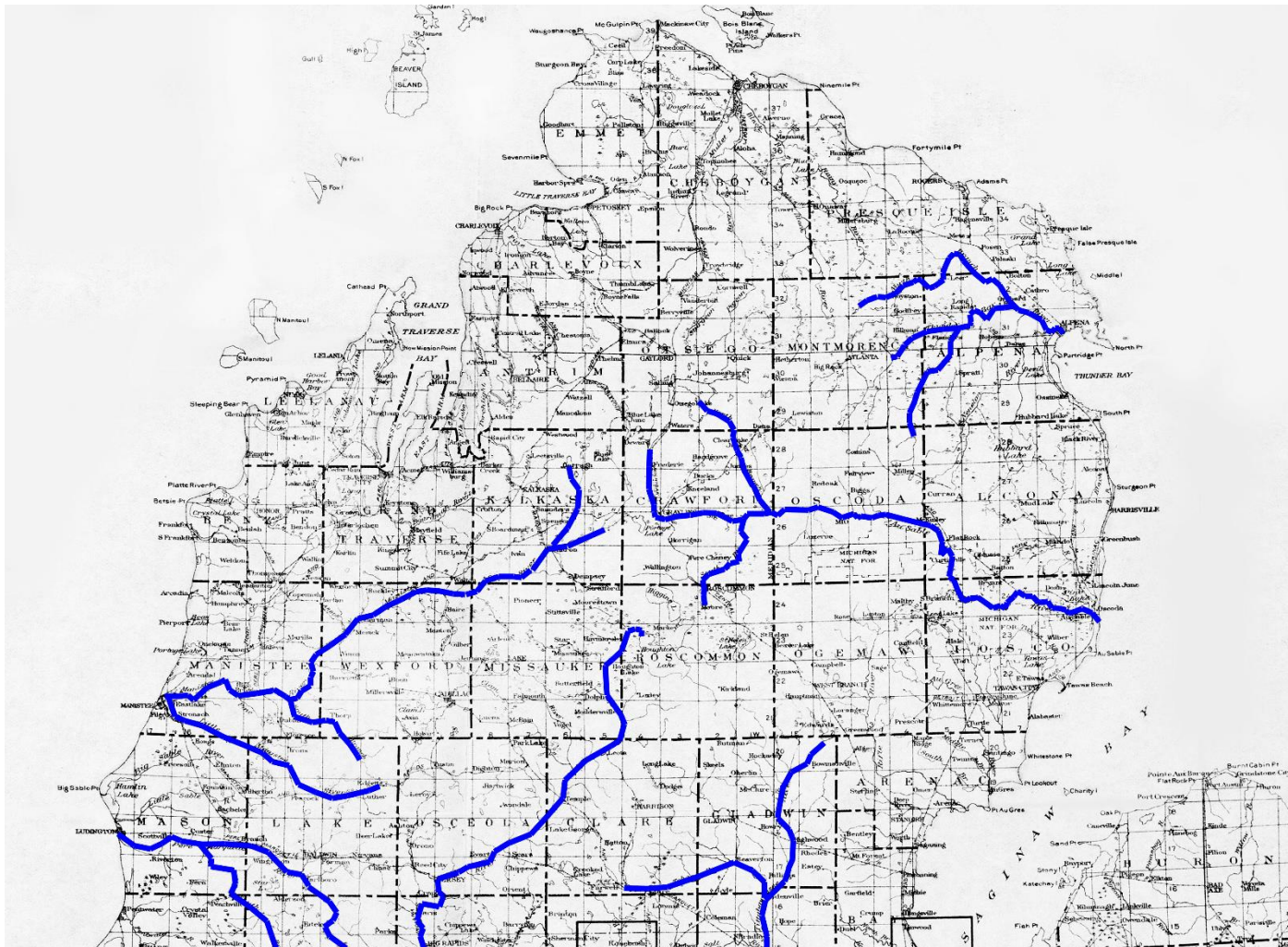


1890 Population Density



Some Major Lower Peninsula Rivers

Many early sawmills were located at the outfall of the rivers



Important Facts:

Pine logs float

Hardwood logs do not float-so logging railroads were important in harvesting that timber

Different species were often harvested sequentially:

First-pine

Second-hardwoods

Last-everything left over-considered trash wood-often used for smelting iron ore

Some RR grades used for pine harvesting were later reused for other types of wood

Until the late 1870s, most pine logging was done in the fall and winter.

Logs were taken to a nearby river using horse-drawn sleighs that operated over ice roads.

Logs were piled up, or “banked” at the edge of the river.

In the spring, after the river ice broke up, logs were released into the river.

The logs floated downriver to mills in cities like Manistee and Muskegon.

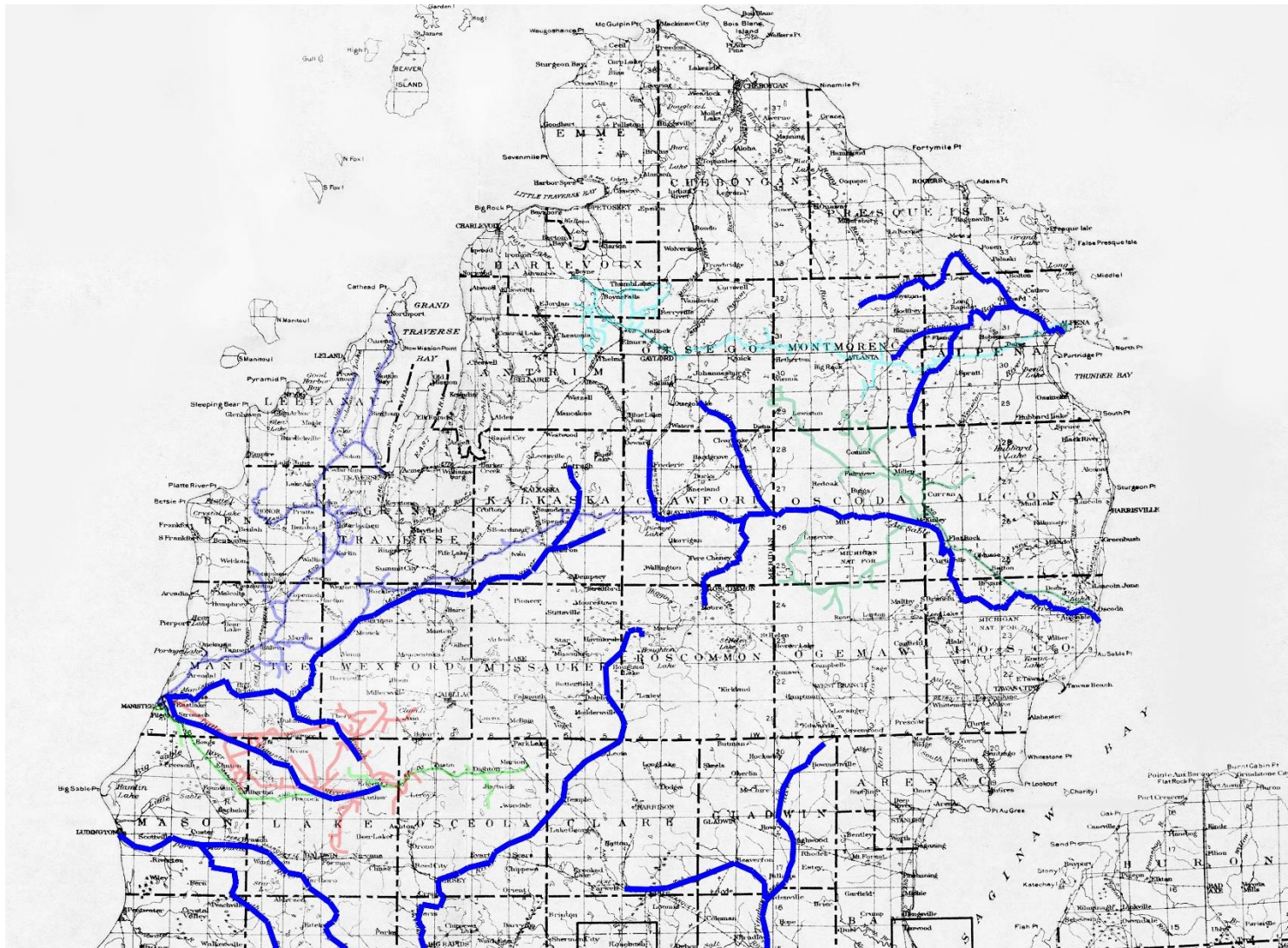
In the late 1870s and 1880s, logging railroads either replaced the ice roads, or terminated directly at a mill. A railroad could be operated efficiently over greater distances than ice roads, and many were used year-round. They could access timber situated far from a river, and could efficiently haul hardwoods to a mill.

Example of a rollway

View southwest toward Lake George & Muskegon River Railroad banking ground and rollway on Muskegon River in northwest Clare County



Major logging railroads terminated at pre-existing sawmills but were not built along the rivers



Sawmills located at Great Lakes ports in Michigan were favorably sited to ship lumber to population centers in the Midwest and Northeast

Chicago

Milwaukee

Detroit

Toledo

Cleveland

Buffalo

Development of Logging Railroads in the Pine Belt



An "Alligator" boat in Ontario

Southern Ontario was logged primarily by using common carrier railways. Northern Ontario, with a network of lakes and rivers, was often logged via “Alligator” boat.

Brian Westhouse reports that “Ontario had little more than two dozen bona fide logging railroads.” From History of Logging and Lumber Railways in Ontario.

The rapid Increase in the number of logging railroads in the Upper Midwest in the 1880s

Roland Maybee notes that 32 narrow-gauge logging railroads were constructed in Michigan during 1882; in 1889, the state had 89 narrow-gauge Lines. From Michigan's White Pine Era, 1840-1900.

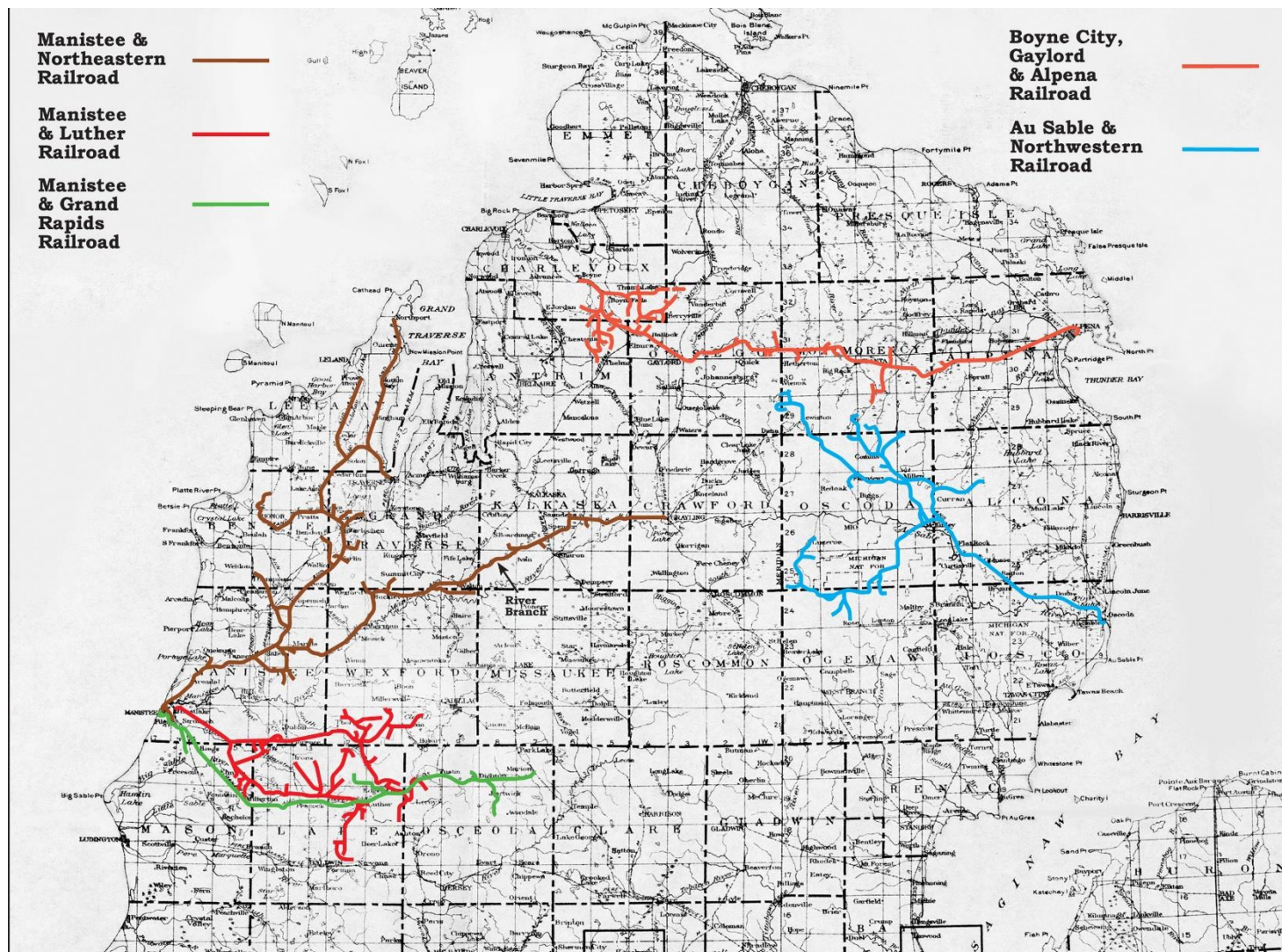
By 1887, 93 logging railroads (standard and narrow-gauge) operated in Michigan. Wisconsin had eleven, and Minnesota, just one. From the February 12, 1887 *Northwestern Lumberman*.

In 1889, The Official Railway List noted that 131 logging railroads were located in Michigan. Wisconsin had 21, and Minnesota, two. Being closer to the major markets for lumber meant that Michigan's timber would be logged out first.

"The peak of Michigan's great timber harvest was reached in 1889-1890 when mills cut a total of 5.5 billion board feet of lumber, mostly pine." From *White Pine Logging: A Background* accessed March 16, 2022 at <https://project.geo.msu.edu/geogmich/loggingbackgrd.html>

By 1900, states farther west had become the leading producers of lumber.

Some Major Lower Peninsula Logging Railroads



Manistee's Major Loggers

Edward Buckley and William Douglas

Buckley & Douglas Railroad-1881 to 1889 (narrow-gauge)

Manistee & Northeastern Railroad-1887 to 1931 (a remnant went to the PM)

Richard G. Peters

The Peters Train Railway (Pine Creek RR)-1878 to 1882 (narrow-gauge)

The Peters Manistee Tram Railway (Filertown RR)-1883 to c. 1889 (narrow-gauge)

The narrow-gauge railroad from Eastlake to Luther

Manistee & Copley Mills Railroad-1885

Manistee & Luther Railroad-1886 to 1913

John Canfield

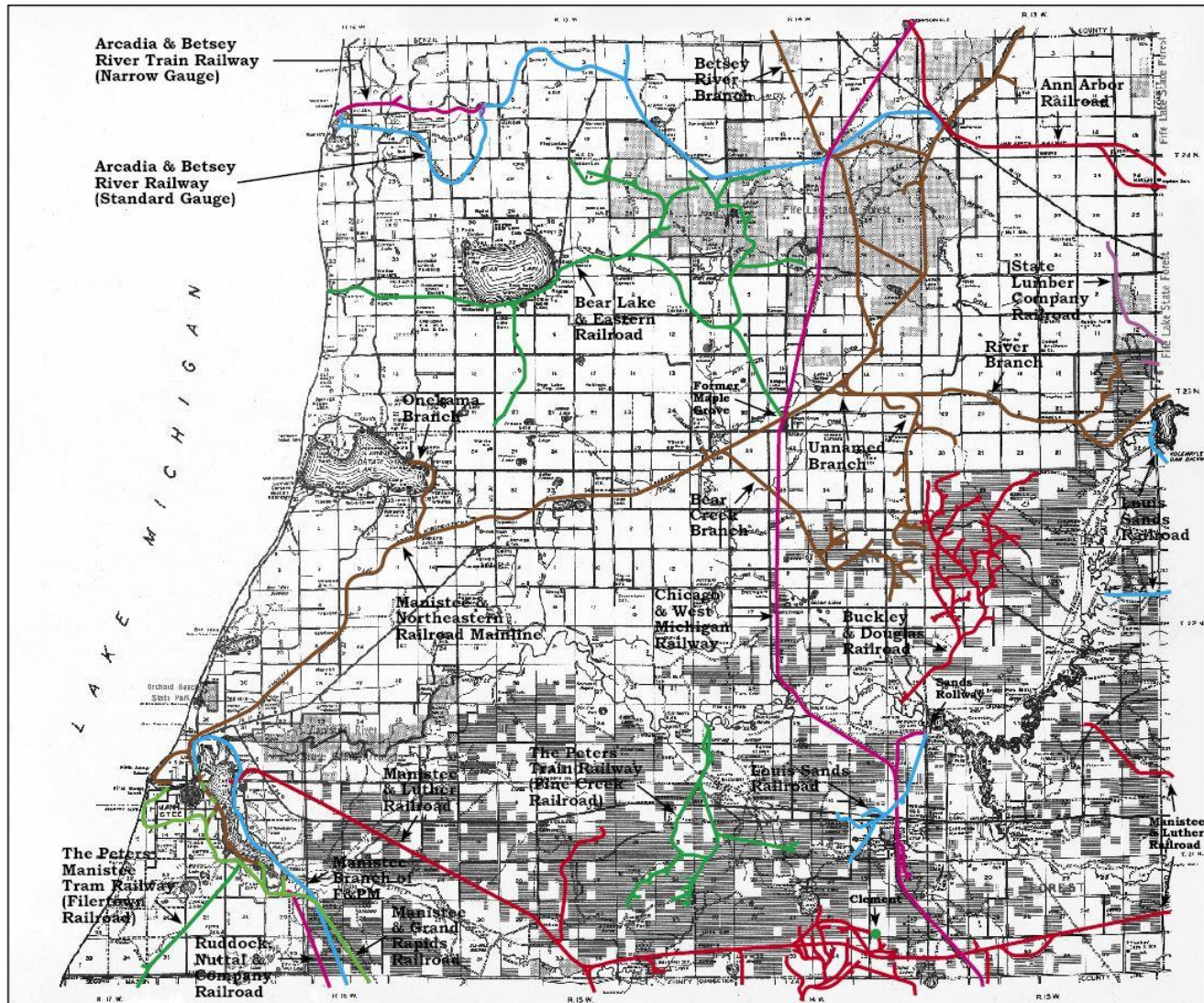
Manistee & Grand Rapids Railroad-1889 to 1913

(Operated as the Michigan East & West Railroad from 1913 to 1918)

Louis Sands

Louis Sands Salt & Lumber Company railroads-1878 to c. 1910 (narrow-gauge)

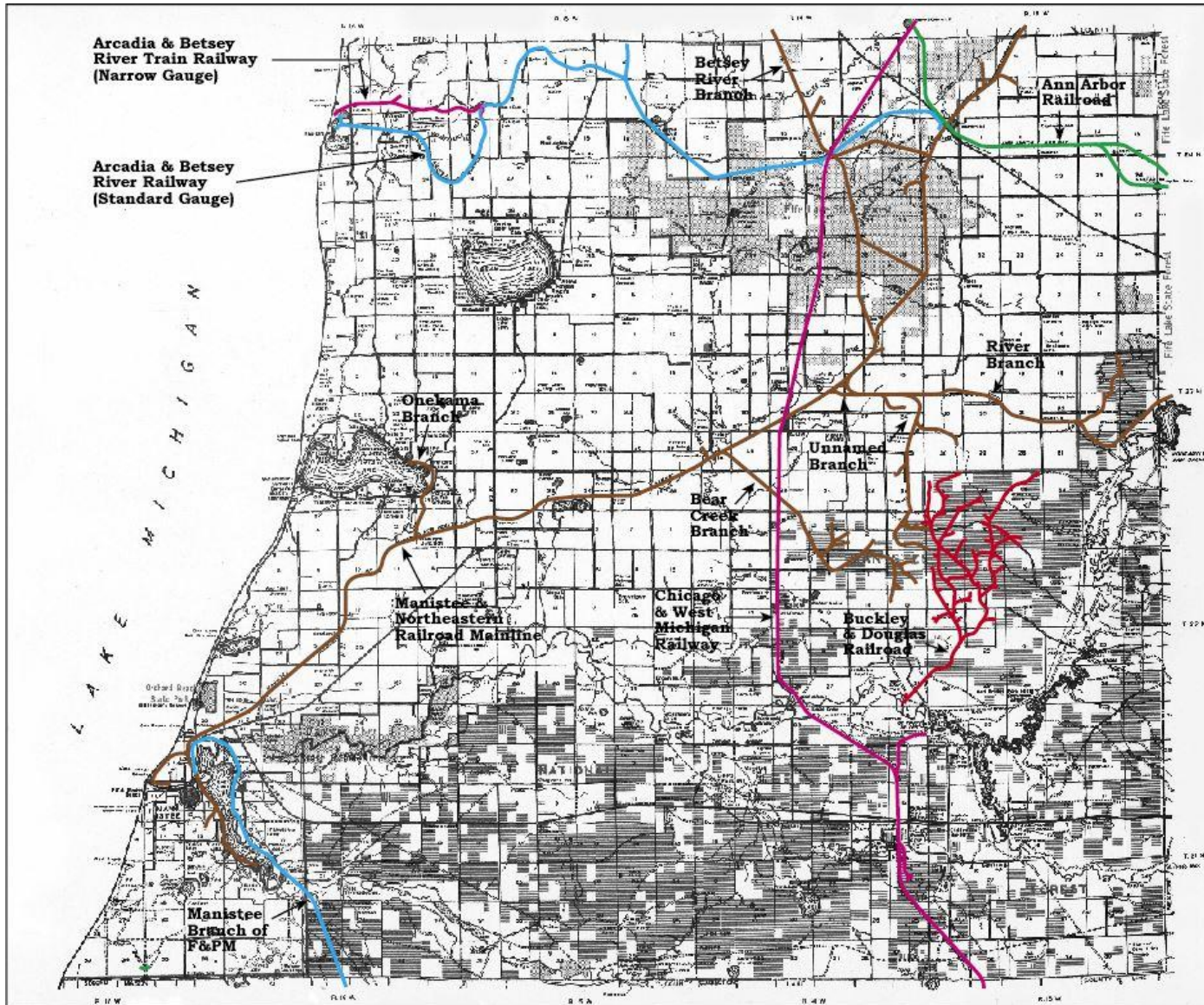
Manistee County Railroads



Buckley and Douglas Logging Lines

Buckley & Douglas Railroad

Manistee & Northeastern Railroad



2010 image of M&NE depot, corner of Jones and River Streets in Manistee-courtesy of Tim Shanahan

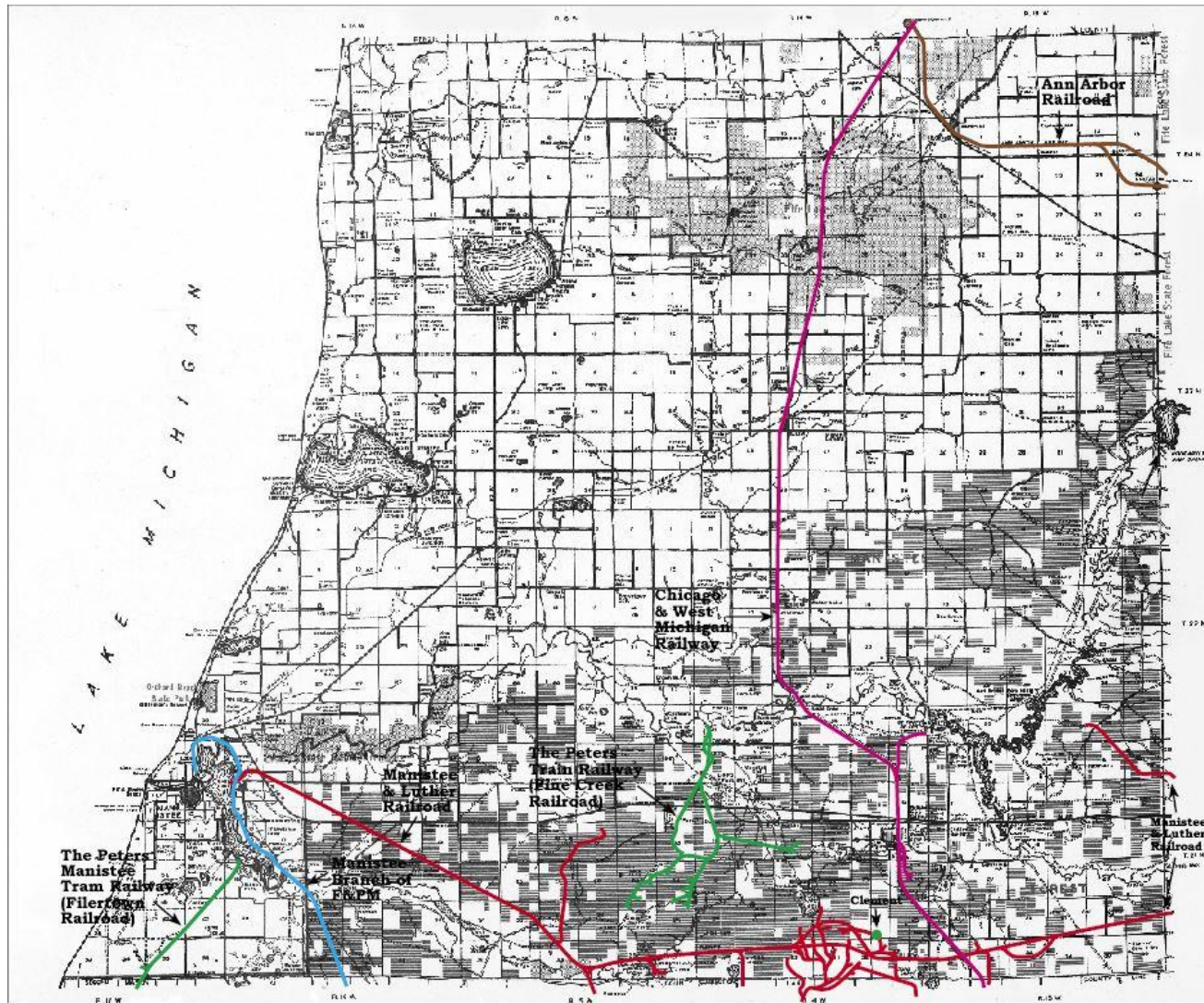


R. G. Peters Railroads

The Peters Train Railway

The Peters Manistee Tram Railway

Manistee & Luther Railroad

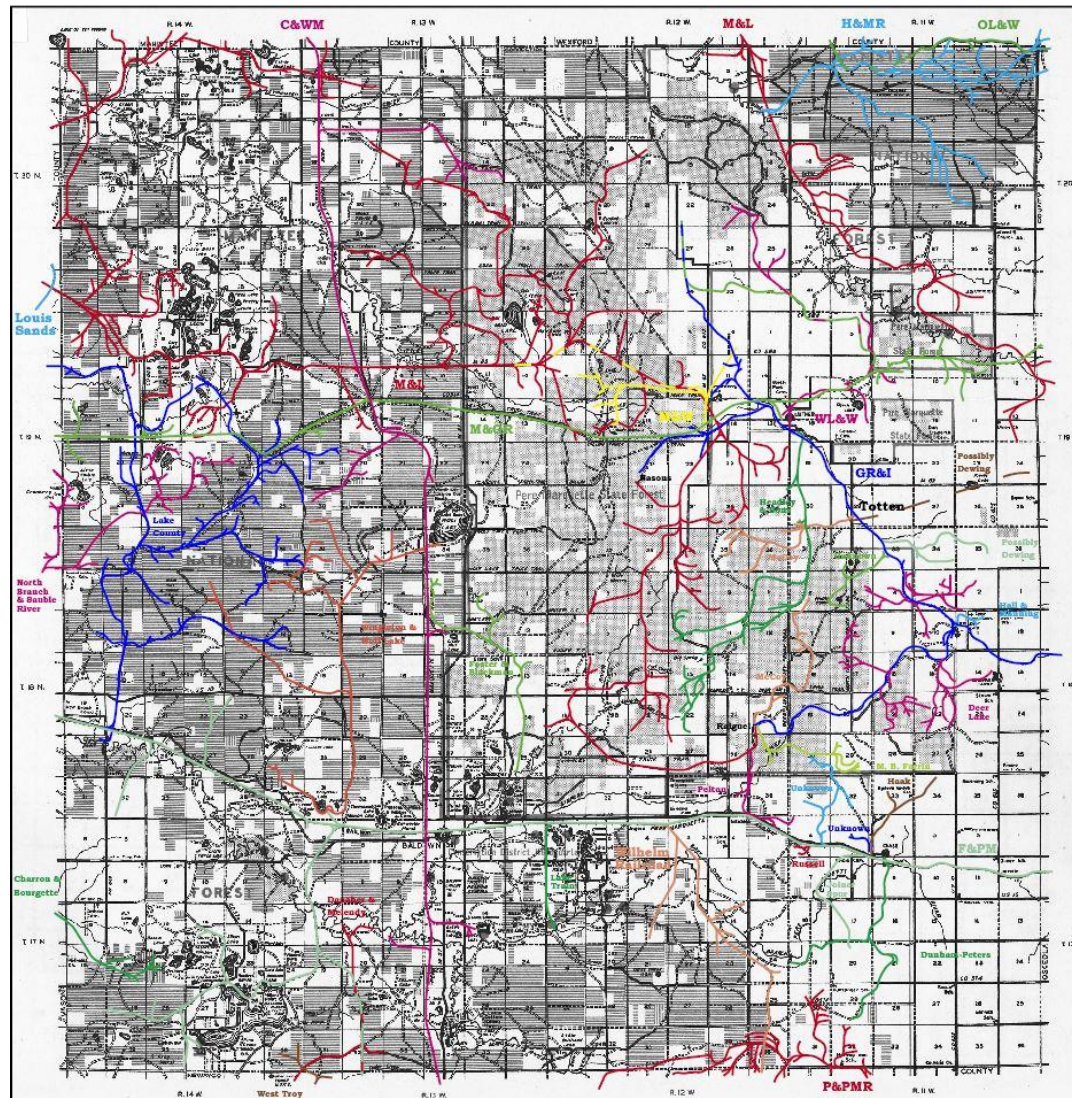


Lake County

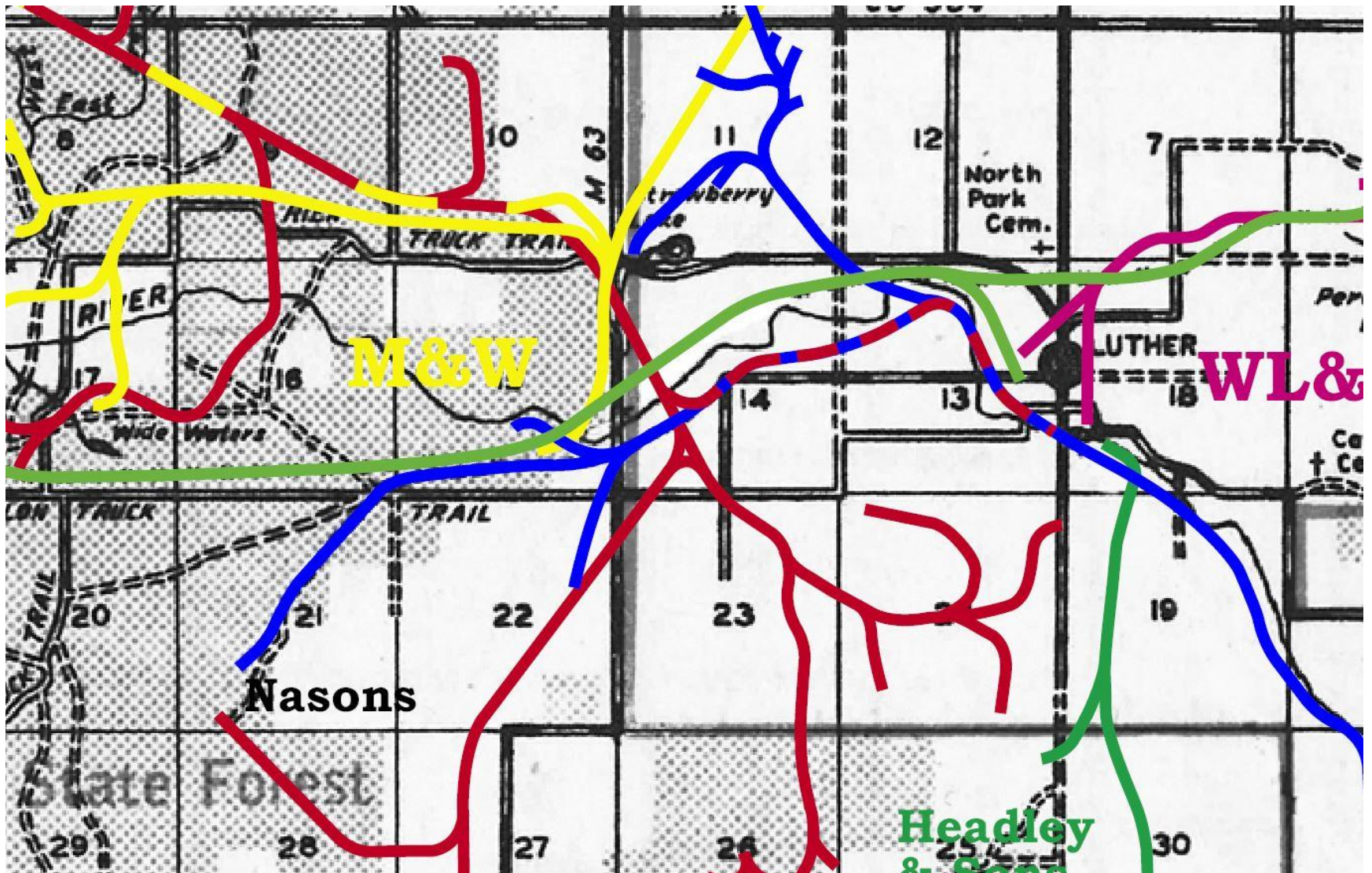
Marthinson & White Railroad

Manistee & Luther Railroad

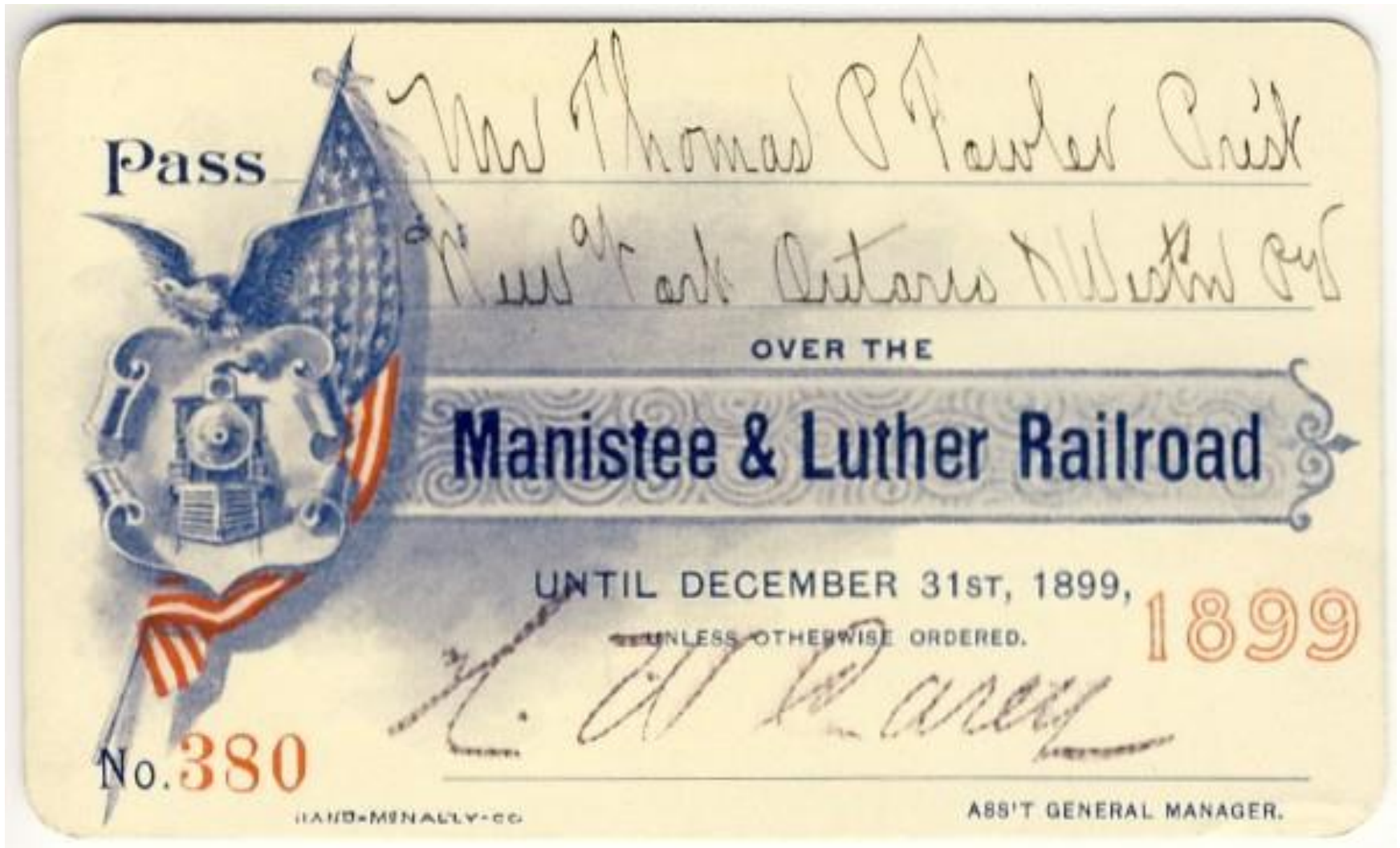
Manistee & Grand Rapids Railroad



Railroads of Luther and Carey



Though not a common carrier, the M&L did carry passengers.
This pass is from the collection of Mark Hicks



Two M&L photos from the later years

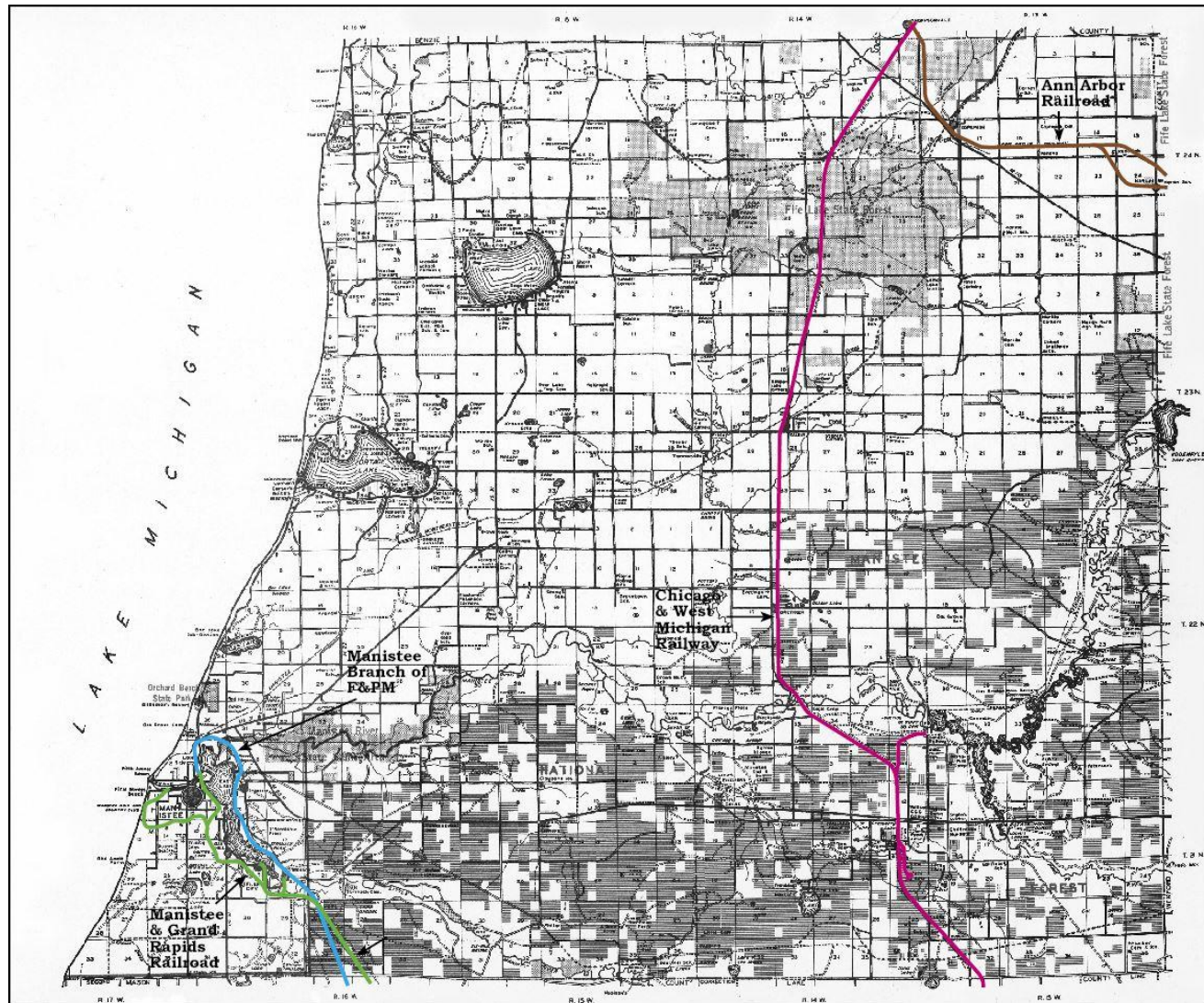


A Manistee & Luther locomotive near Hoxeyville

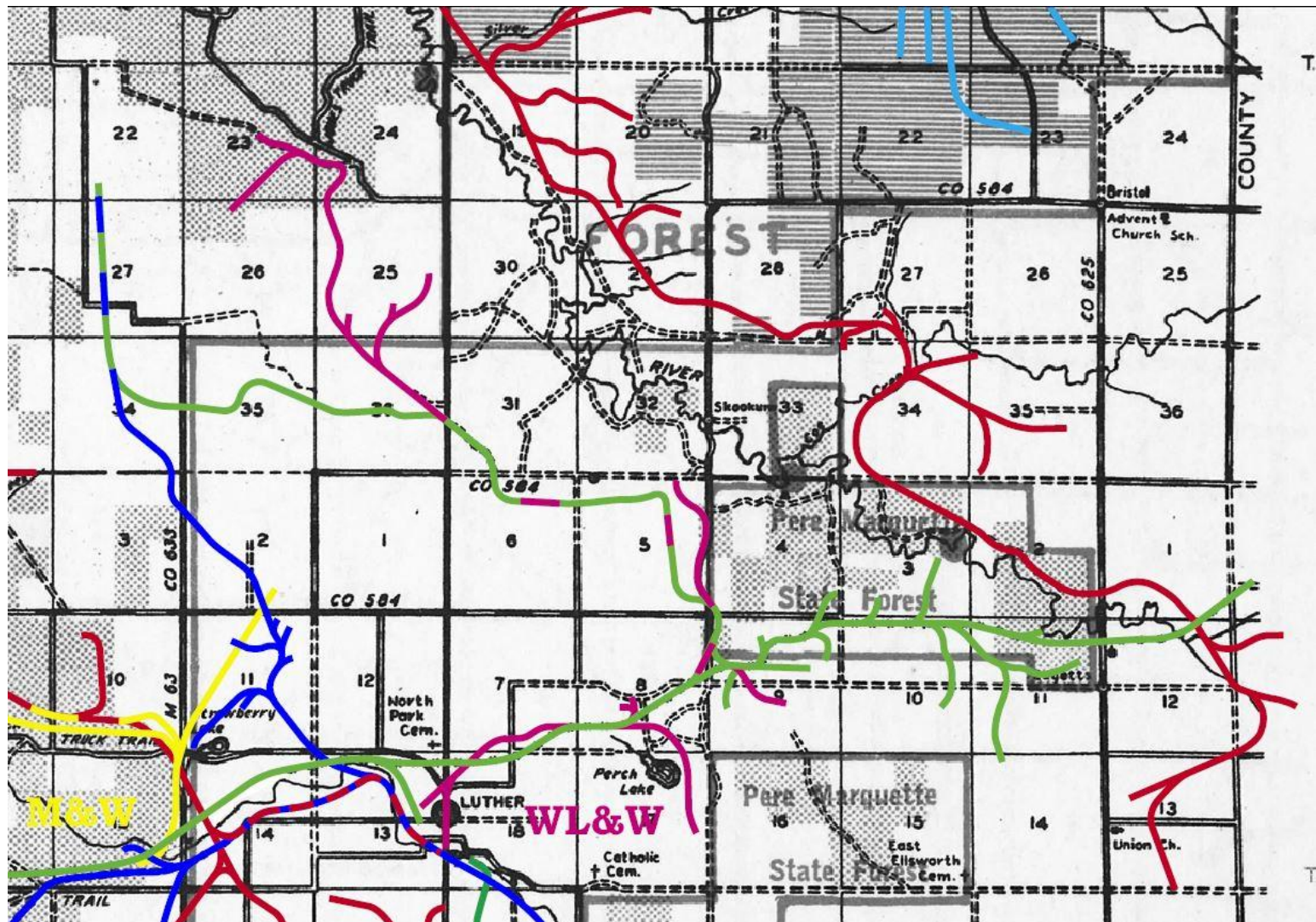


A Manistee & Luther train paused on a trestle over Pine River in southwest Wexford County

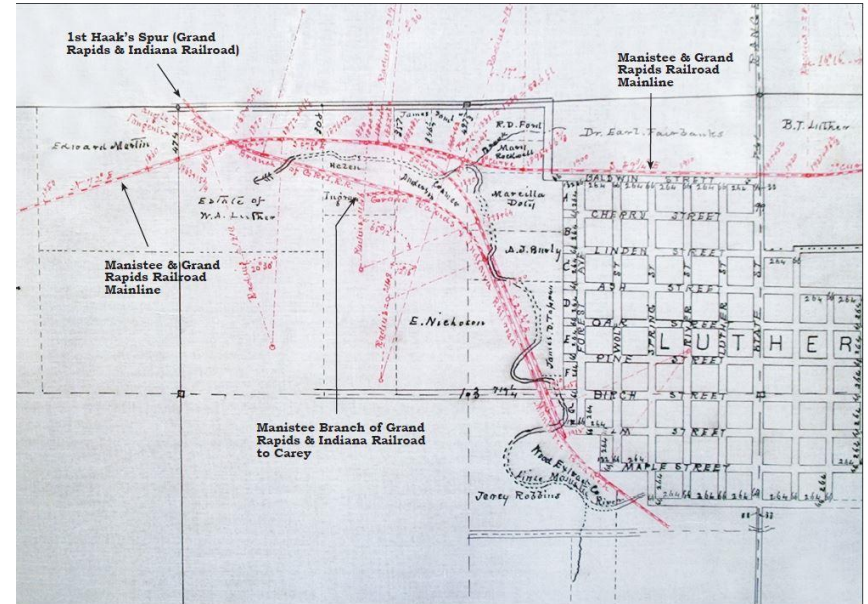
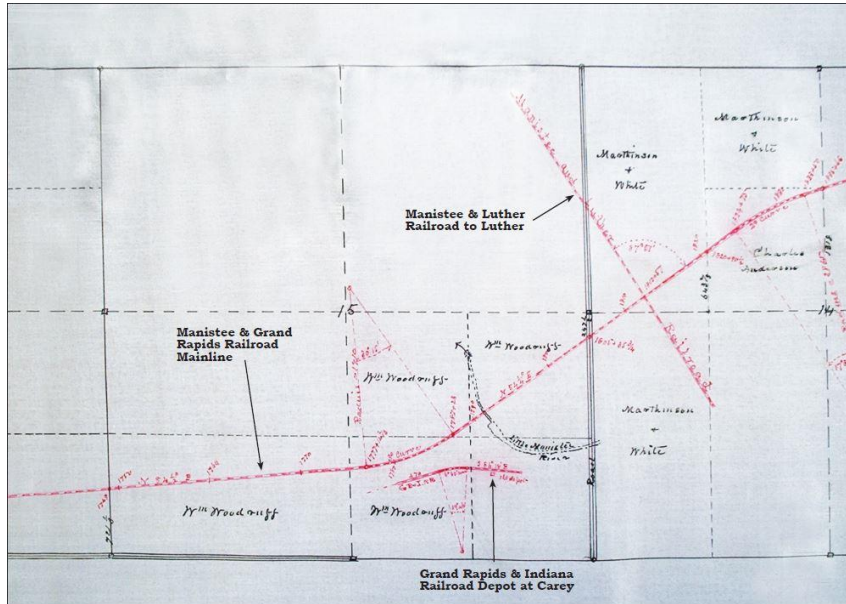
Manistee & Grand Rapids Railroad in Manistee County



Manistee & Grand Rapids spur to Haack's Mill-reused some of the WL&W RR and an abandoned GR&I spur



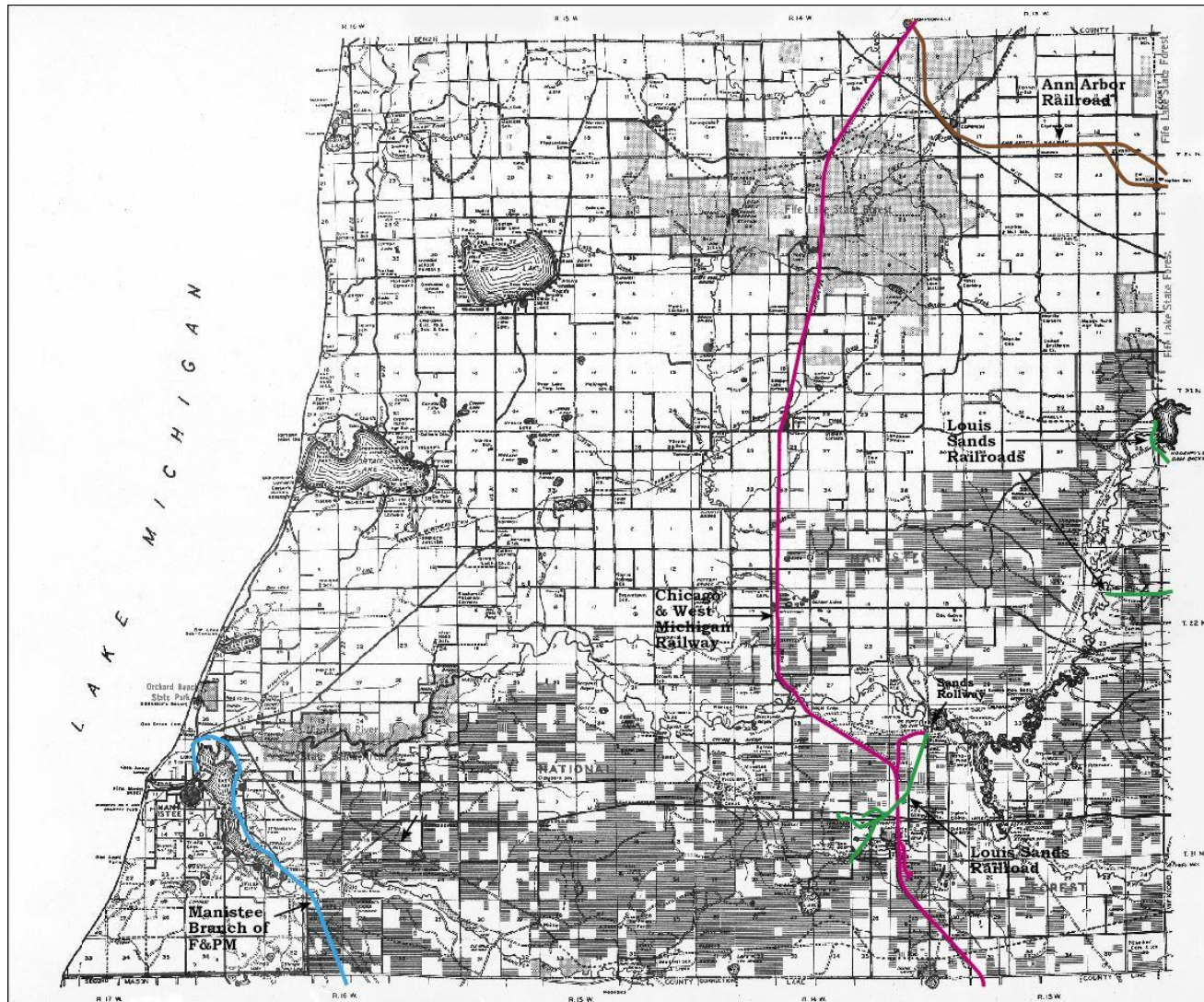
Manistee & Grand Rapids at Carey and Luther



Eventually, the line was extended east to a junction with the Ann Arbor Railroad at Marion, in Osceola County

Three Louis Sands railroads in Manistee County

Other Sands railroads in Kalkaska, Mason, Missaukee, and Wexford Counties

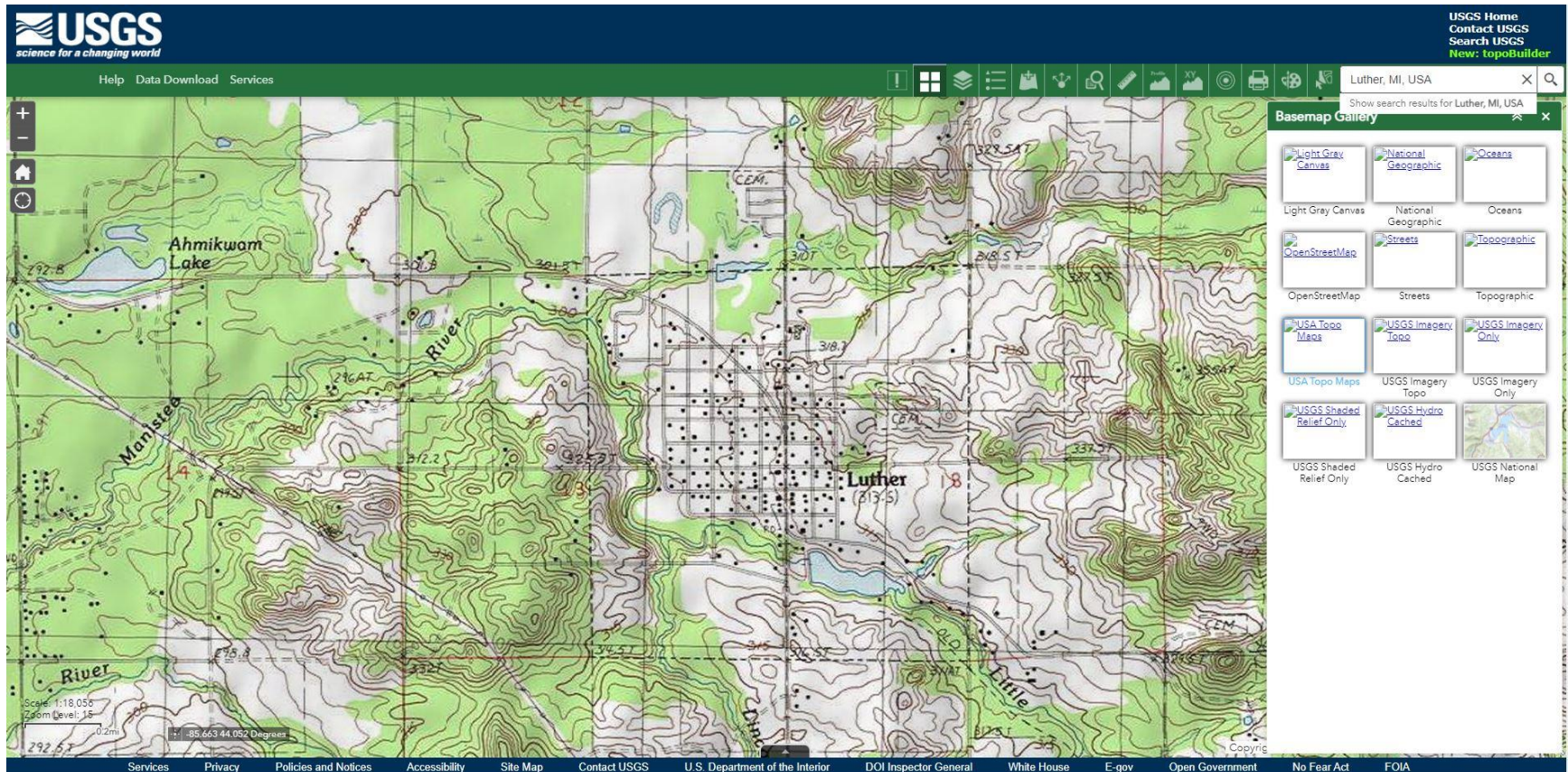


The US Geological Survey Website

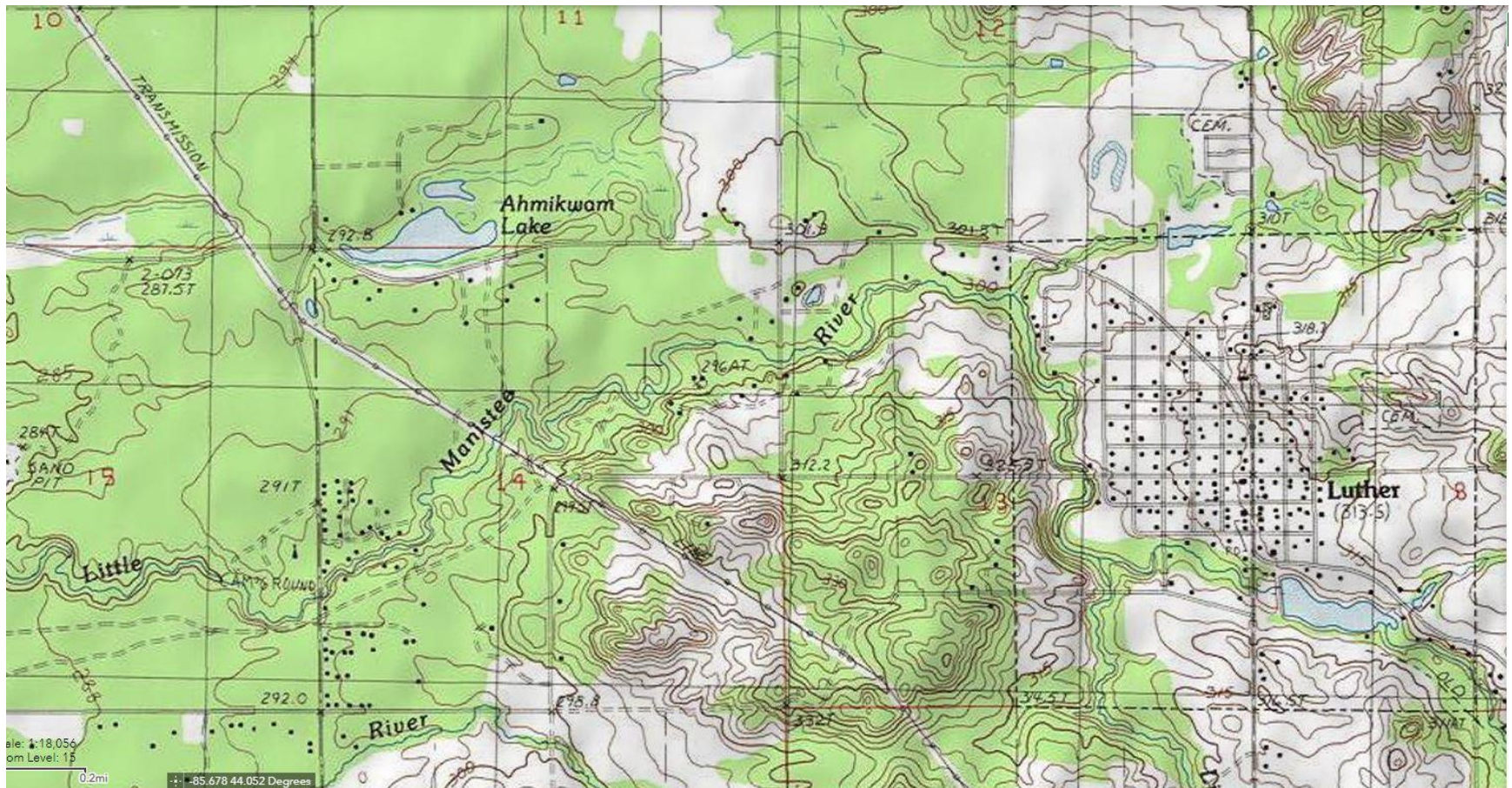
Opening screen-Luther selected and Basemap icon checked

The screenshot displays the USGS website interface. At the top left is the USGS logo with the tagline "science for a changing world". Below it is a navigation bar with links: "Help", "Data Download", and "Services". On the top right, there are links for "USGS Home", "Contact USGS", and "Search USGS", along with a "New: topoBuilder" link. A search bar in the top right corner contains the text "Luther, MI, USA". Below the search bar is a "Basemap Gallery" with a grid of map style icons. The selected style is "Light Gray Canvas". The main map area shows a topographic map of Luther, MI, with the Little Manistee River and surrounding roads. The map includes a scale bar (1:18,056) and a zoom level indicator (15). At the bottom of the page is a navigation bar with links: "Services", "Privacy", "Policies and Notices", "Accessibility", "Site Map", "Contact USGS", "U.S. Department of the Interior", "DOI Inspector General", "White House", "E-gov", "Open Government", "No Fear Act", and "FOIA".

After selecting “USA TOPO Maps”



After adjusting to show Luther and Carey

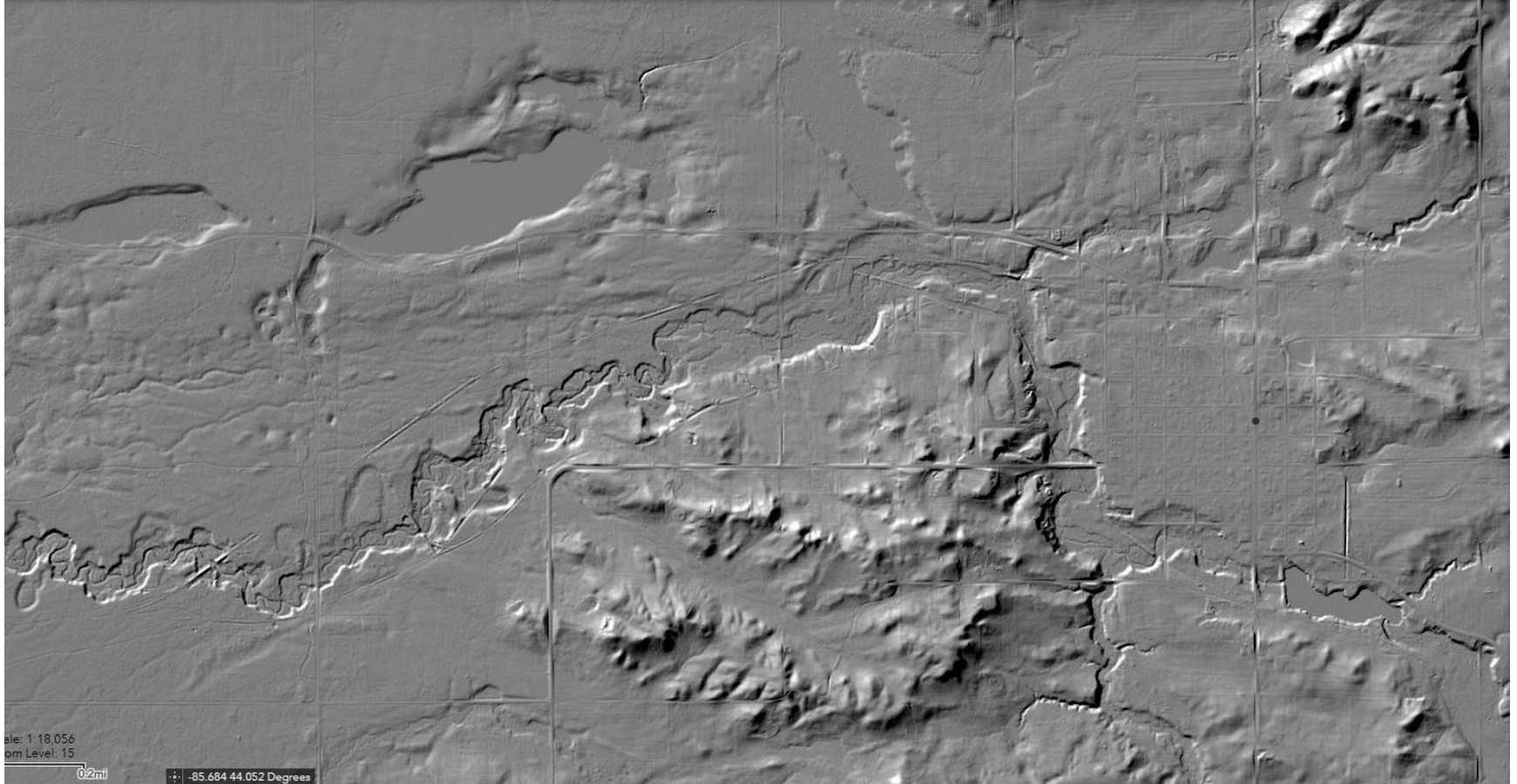


Aerial layer showing Luther and Carey



LiDAR layer of same area

Capable of zooming in much closer than the
Topographical and Aerial Layers

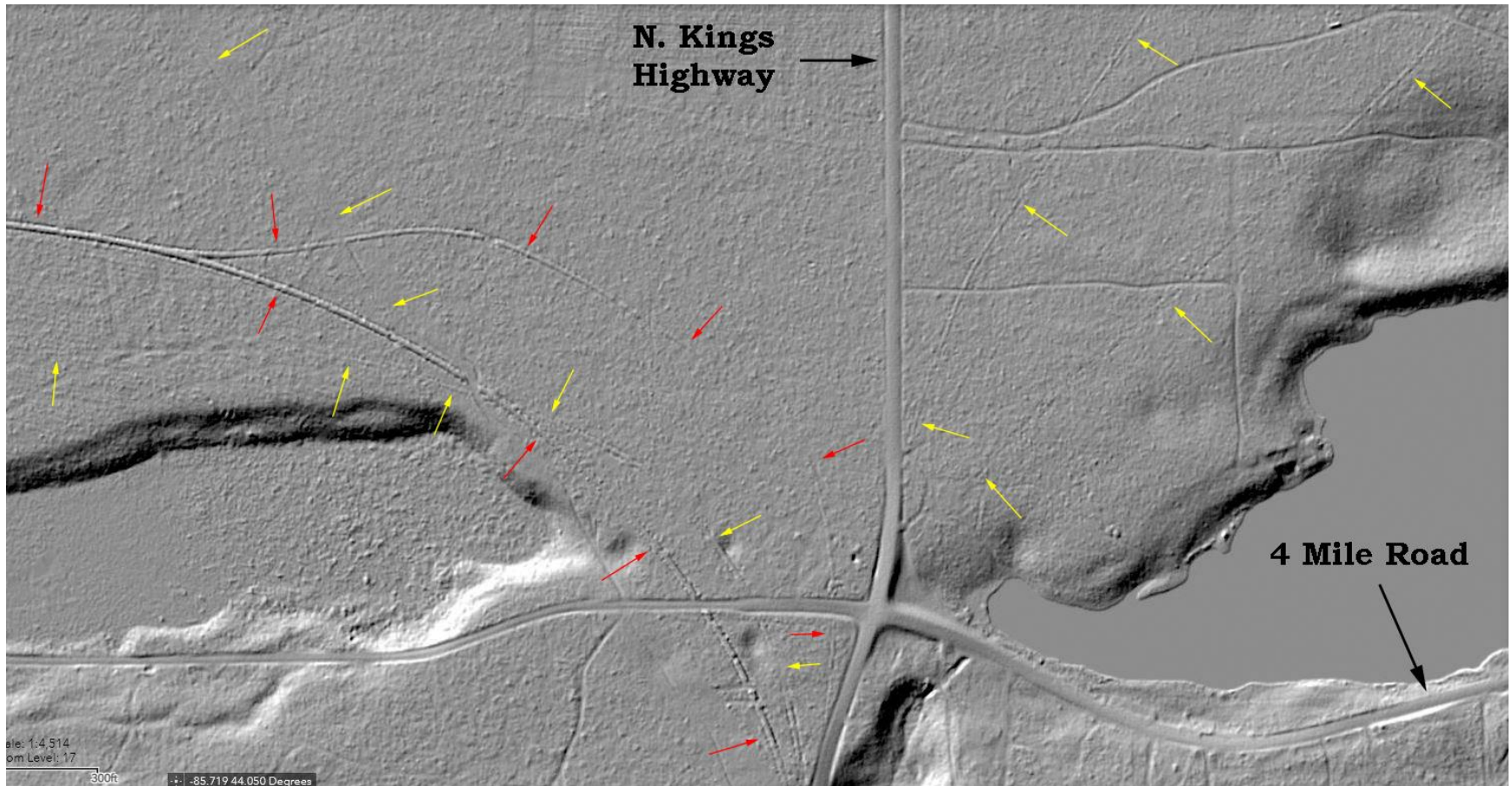


LiDAR is an abbreviation for Light Detection and Ranging

North of Carey

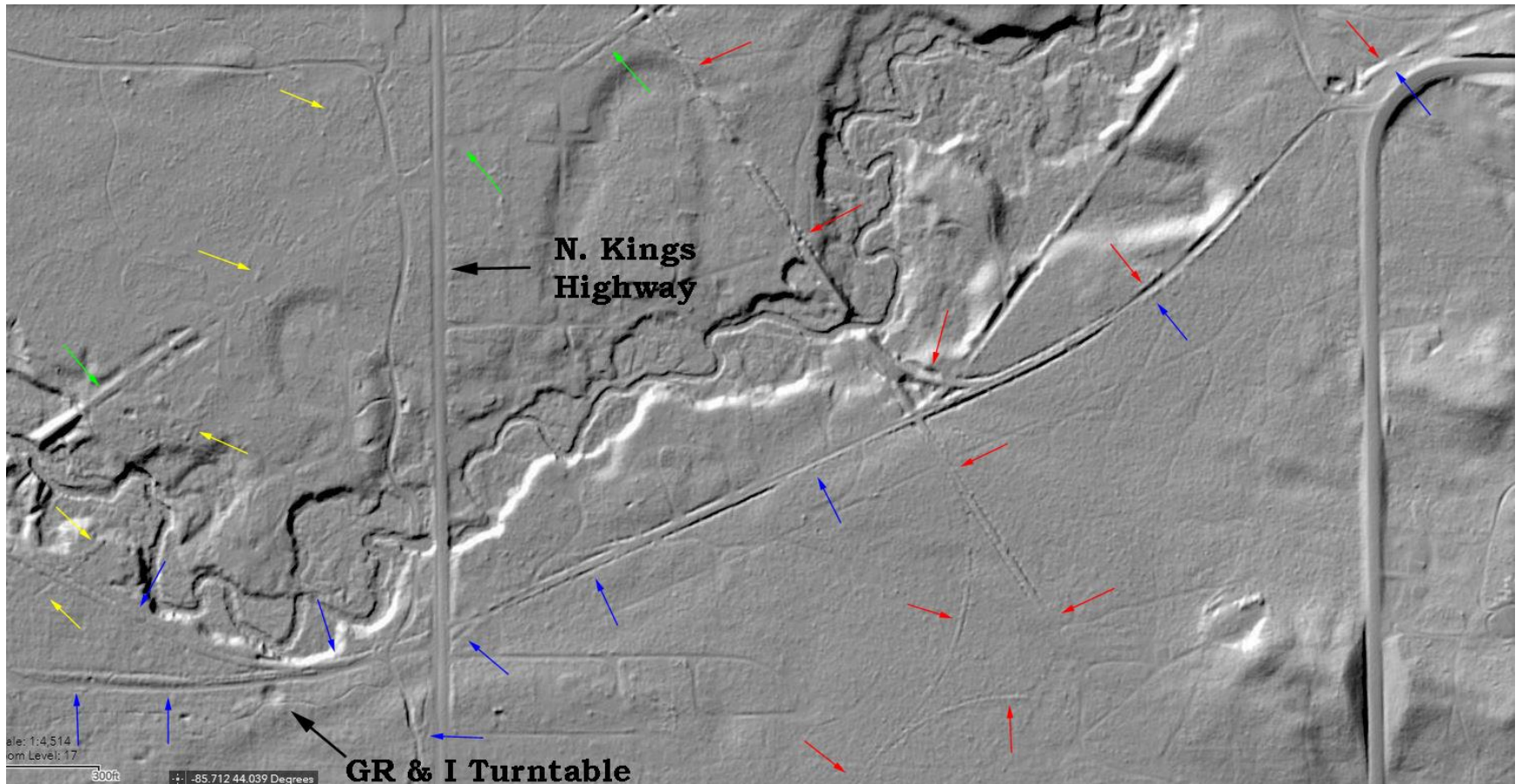
Marthinson & White Grade is yellow

Manistee & Luther Grade is red



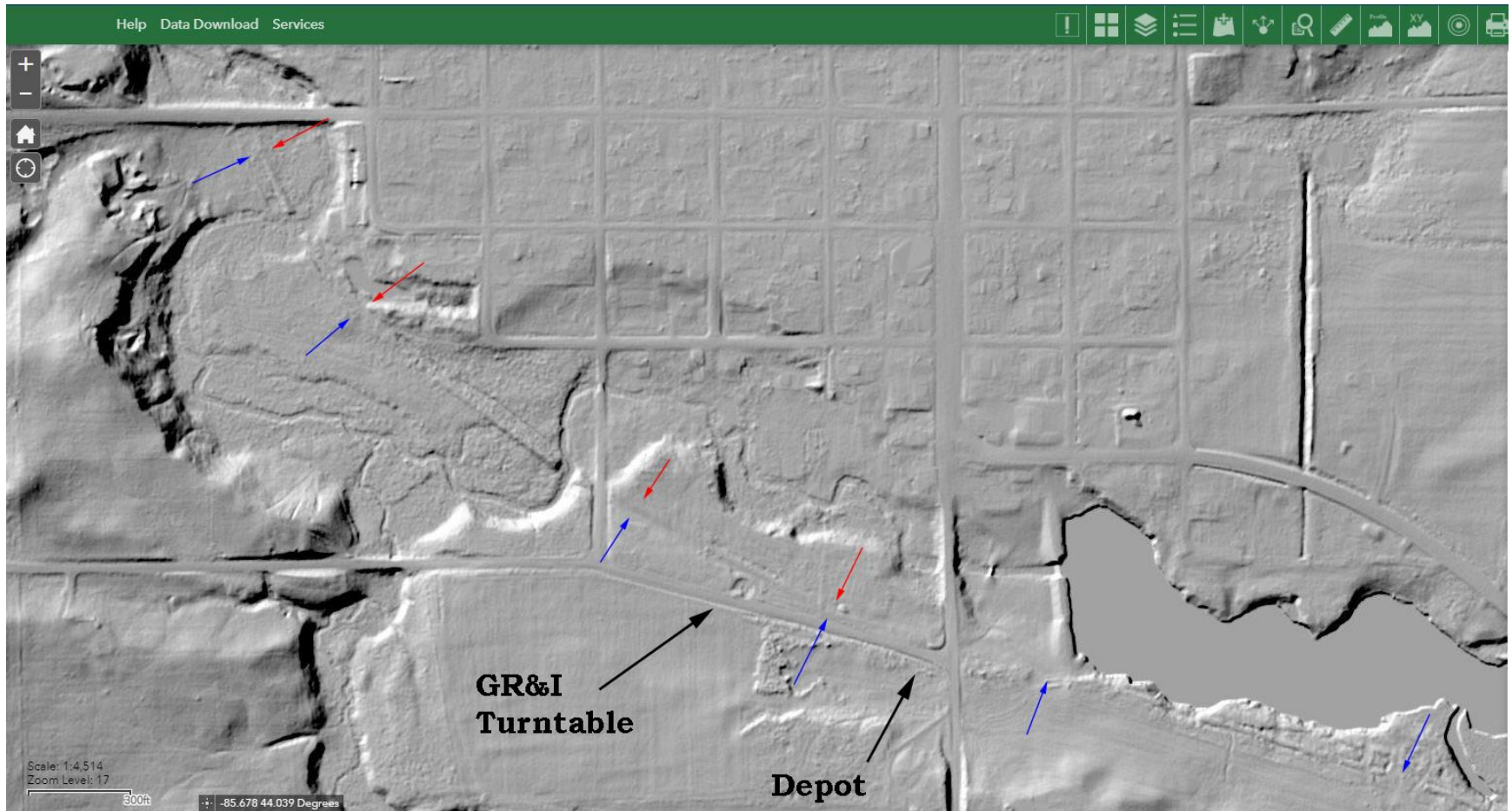
At Carey

Marthinson & White Grade is yellow
Manistee & Grand Rapids Grade is green
Manistee & Luther Grade is red
Grand Rapids & Indiana Grade is blue



South end of Luther

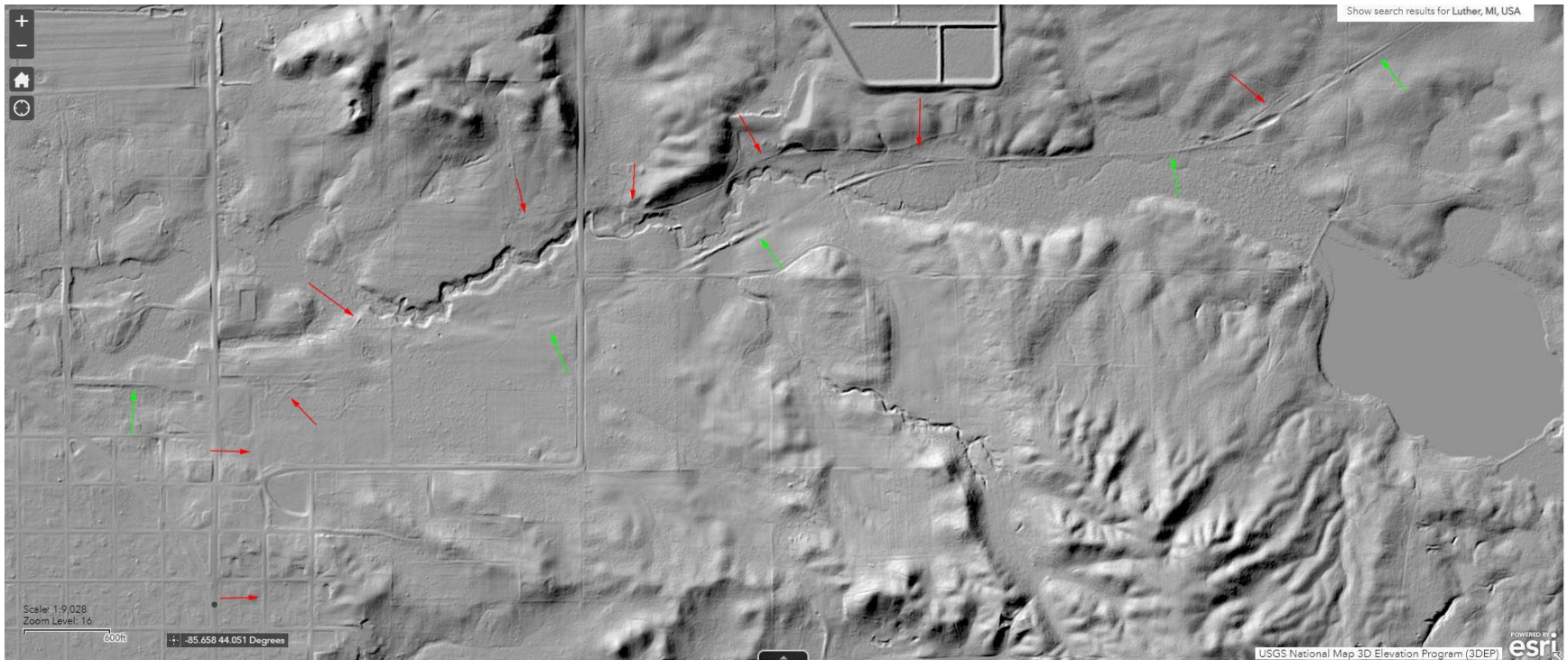
Manistee & Luther Grade is red
Grand Rapids & Indiana Grade is blue



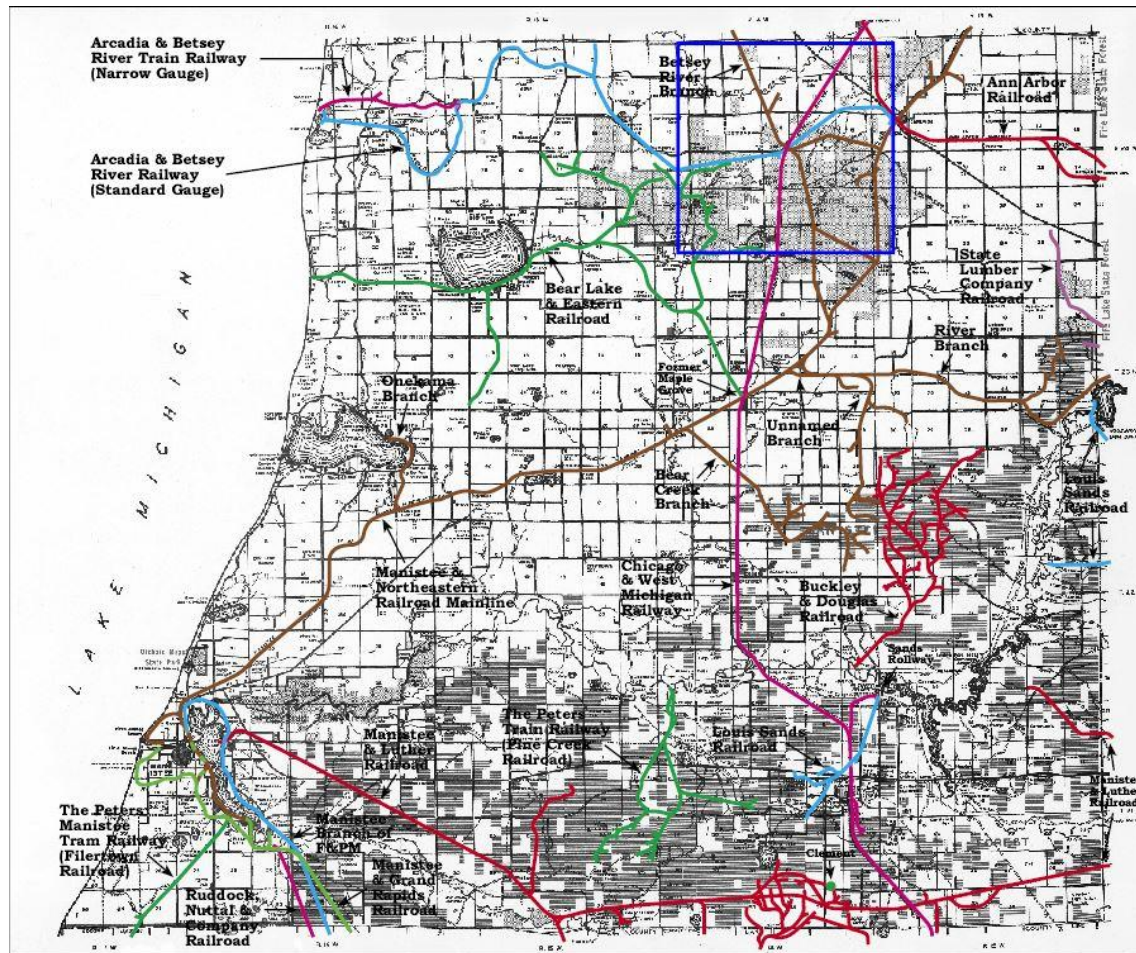
Northeast of Luther

Manistee & Grand Rapids is green

Wilson, Luther & Wilson is red



Area of Henry, Michigan

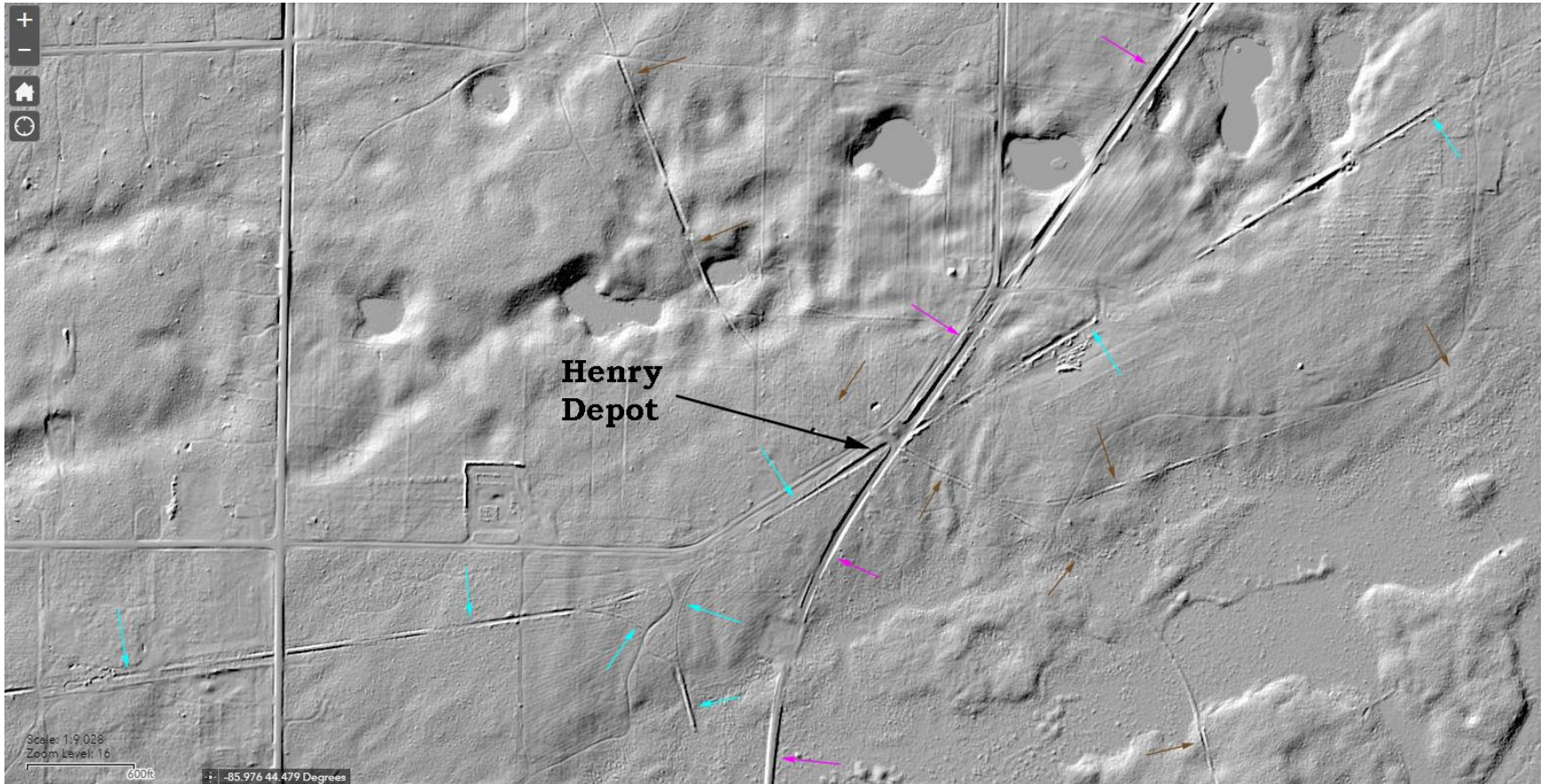


LiDAR at Henry

Chicago & West Michigan is maroon

Arcadia & Betsey River is blue

Manistee & Northeastern is brown



View northeast toward depot
A&BR reached Henry in 1895



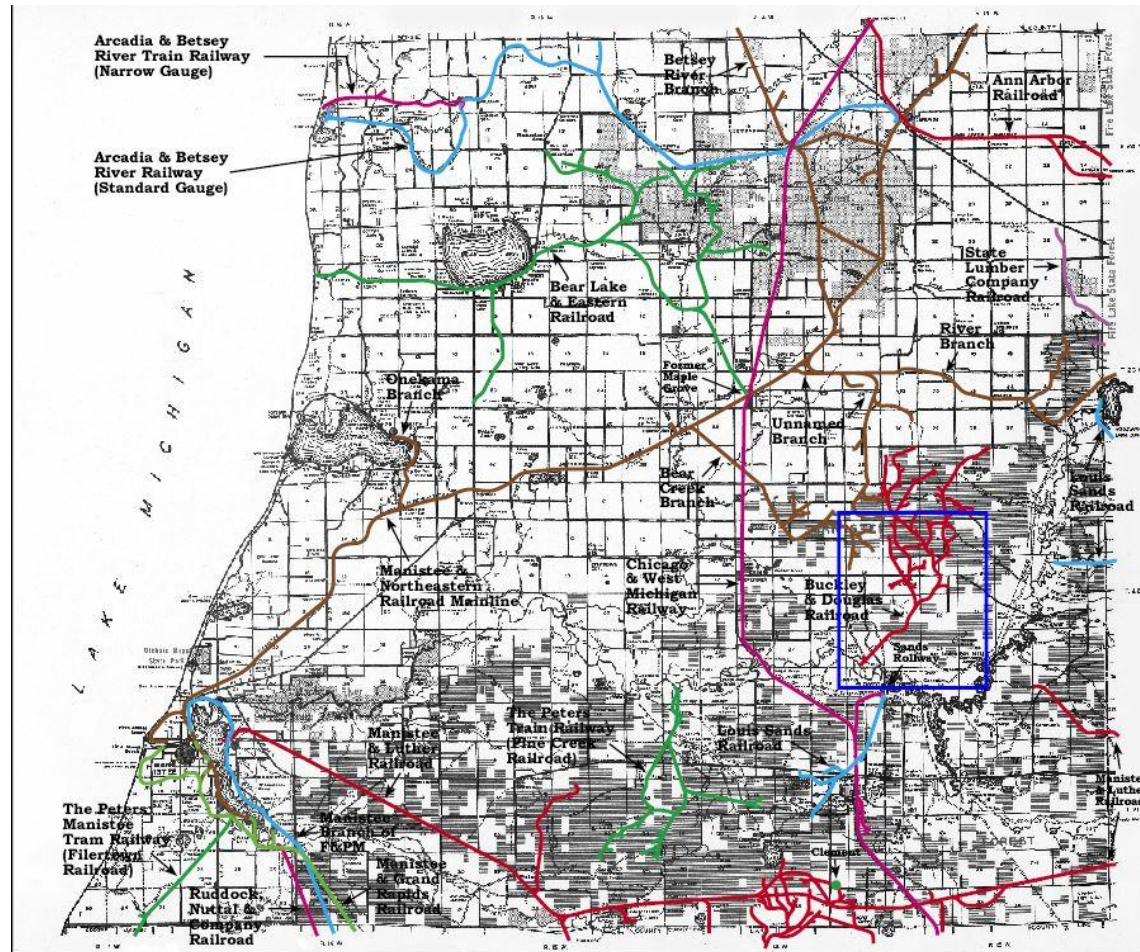
View east toward A&BR train on the C&WM diamond at Henry



The same view at Henry in 2016



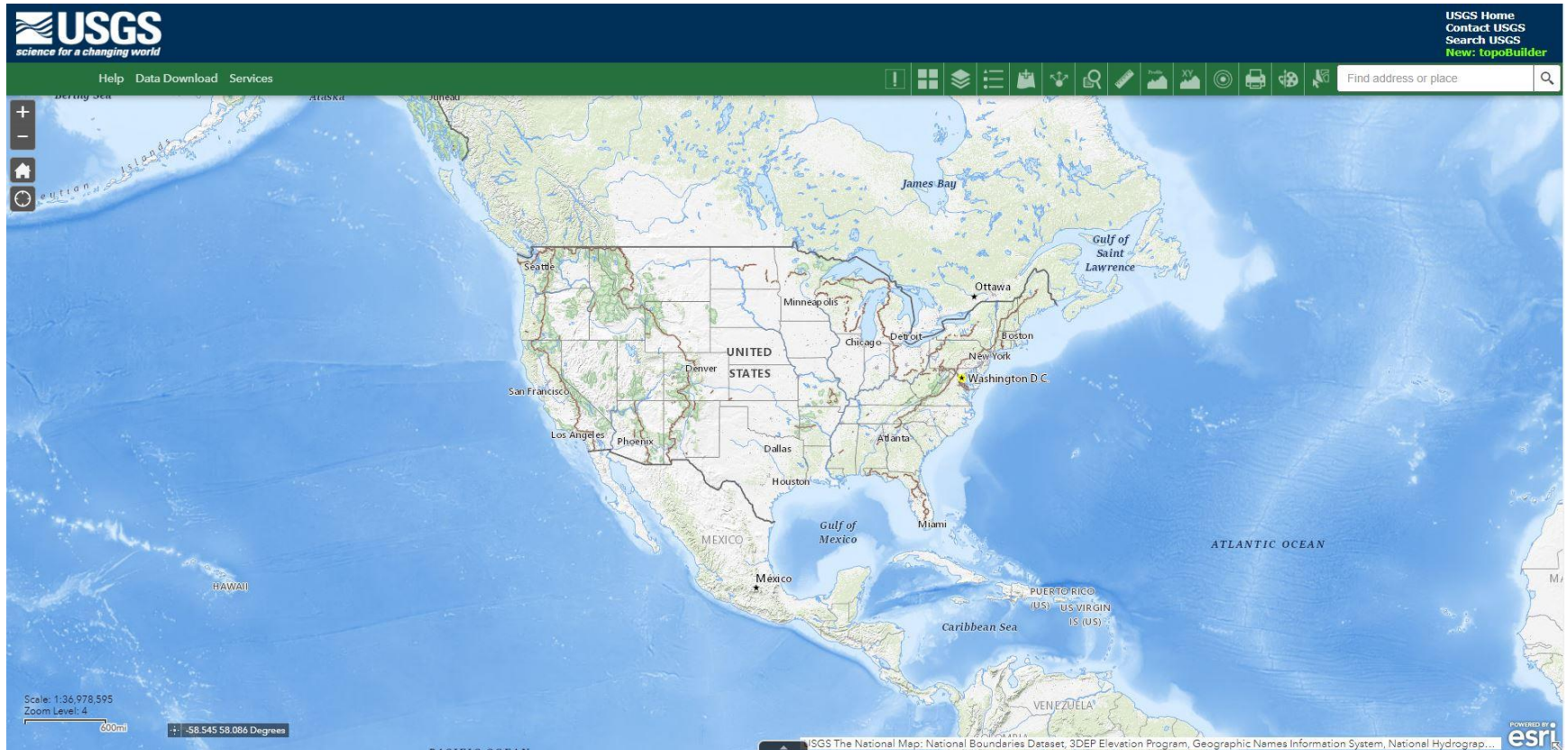
Using the USGS website to map the south end of the Buckley & Douglas railroad



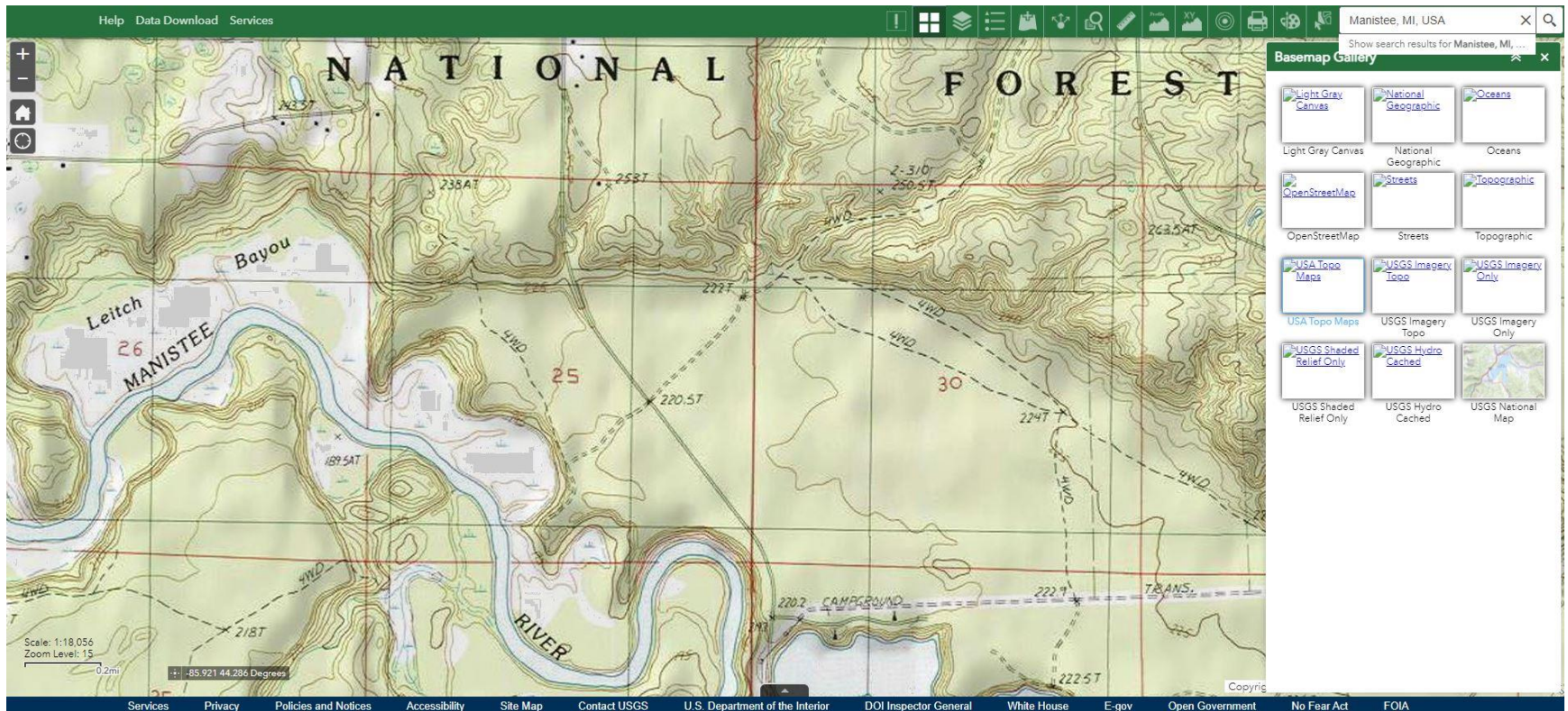
Start at the USGS website:

<https://apps.nationalmap.gov/viewer/>

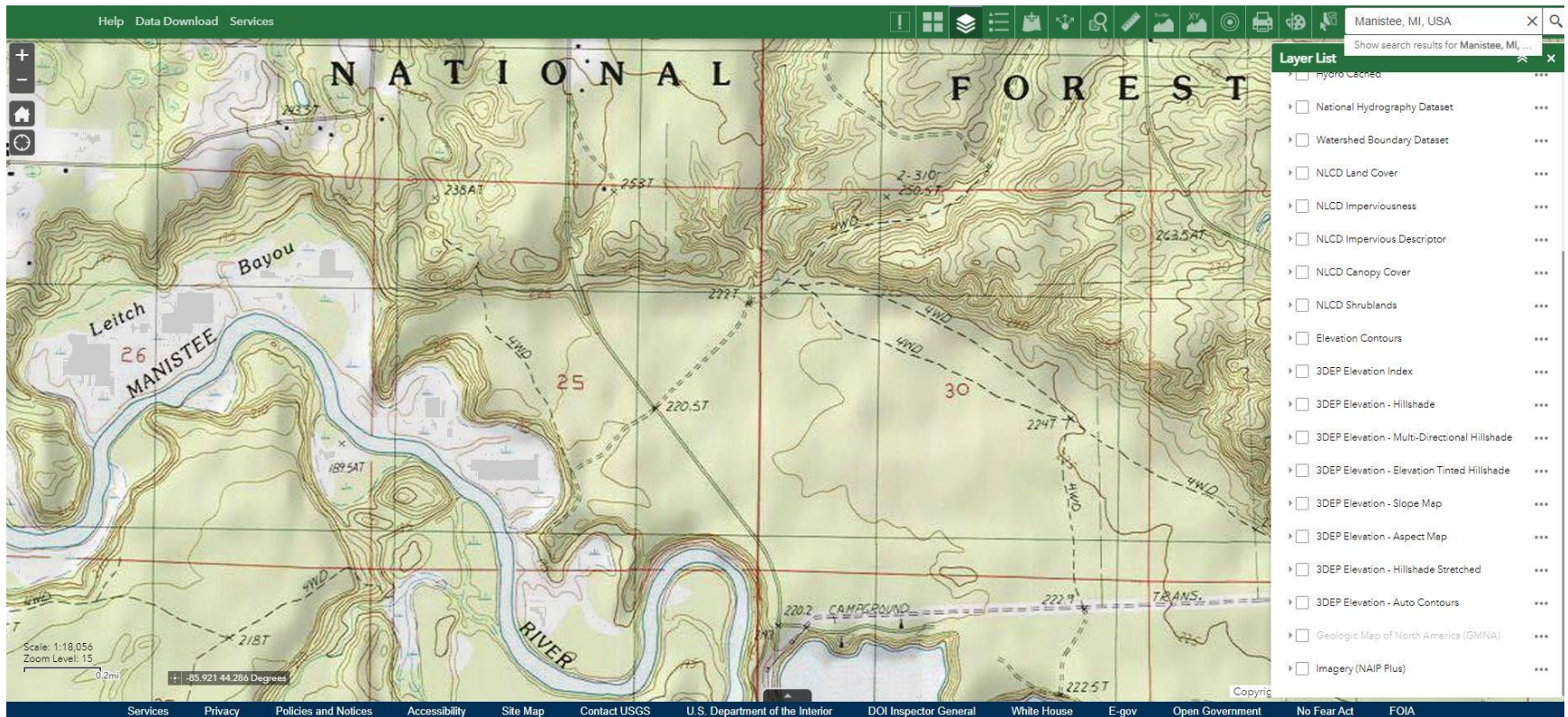
Type in the name of some nearby community like Kaleva or Manistee, then press the “Enter” key on your computer



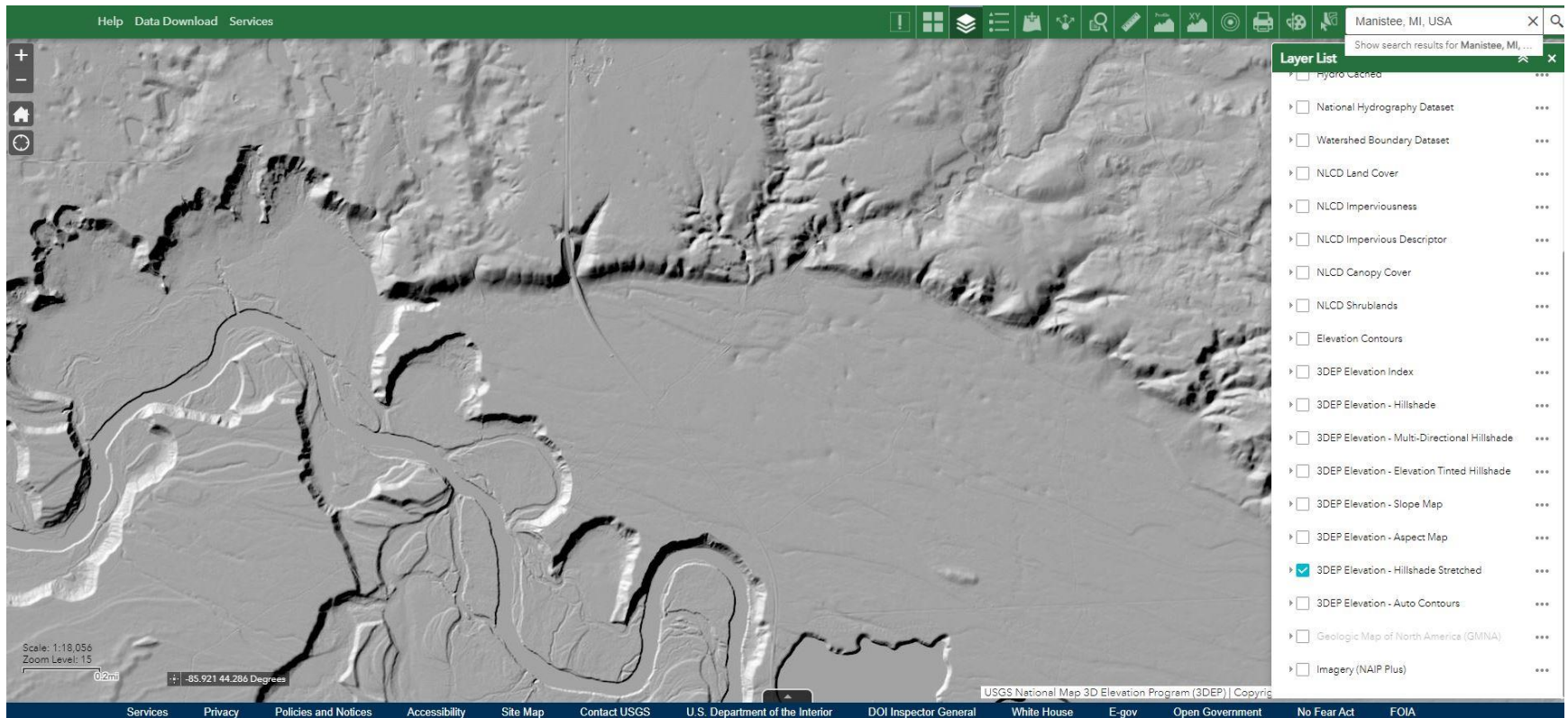
Move the image to the terminal of the railroad by holding down the left button on your mouse-then zoom in (upper left corner of screen)-then left click on the Basemap icon



Left click on the Layer List icon

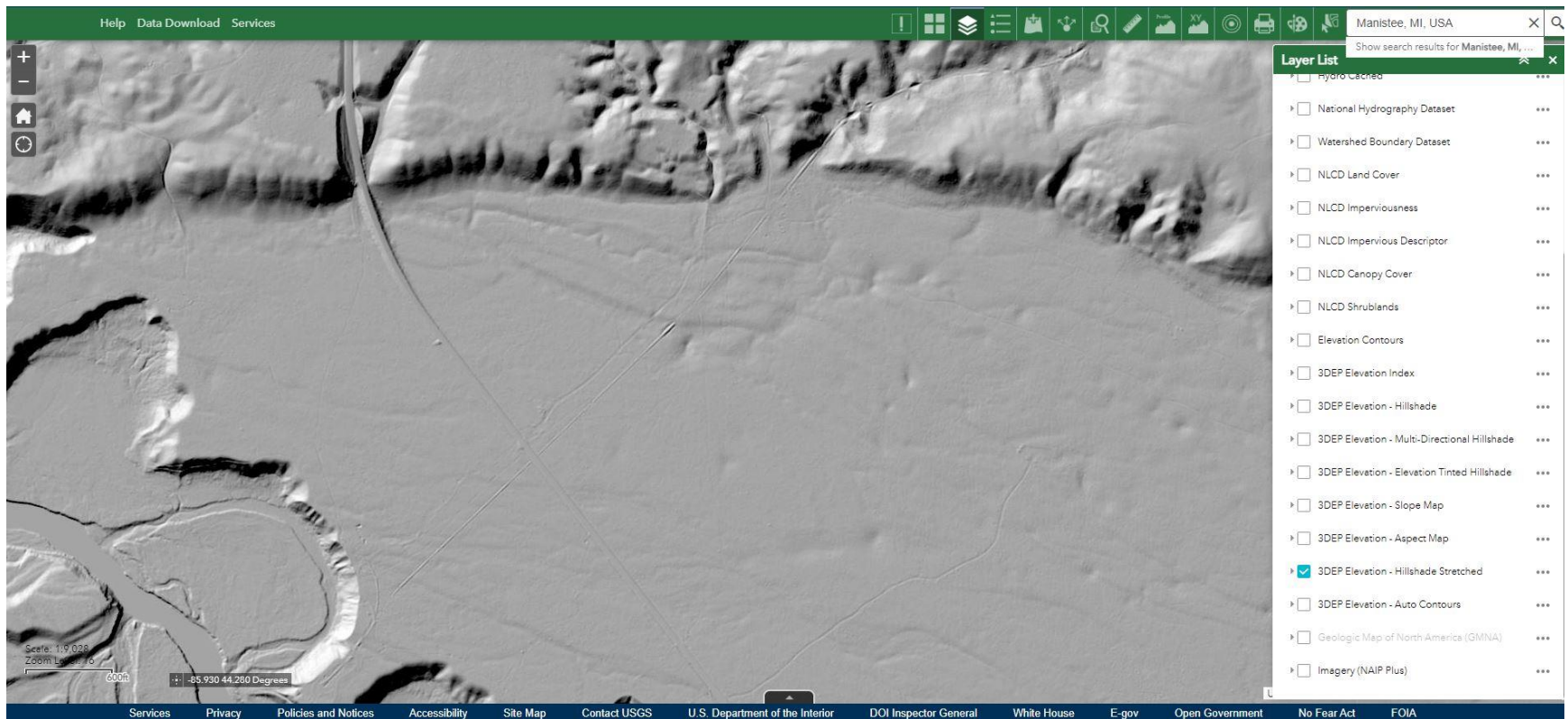


In the Layer List, check the “3DEP Elevation-Hillshade Stretched” box

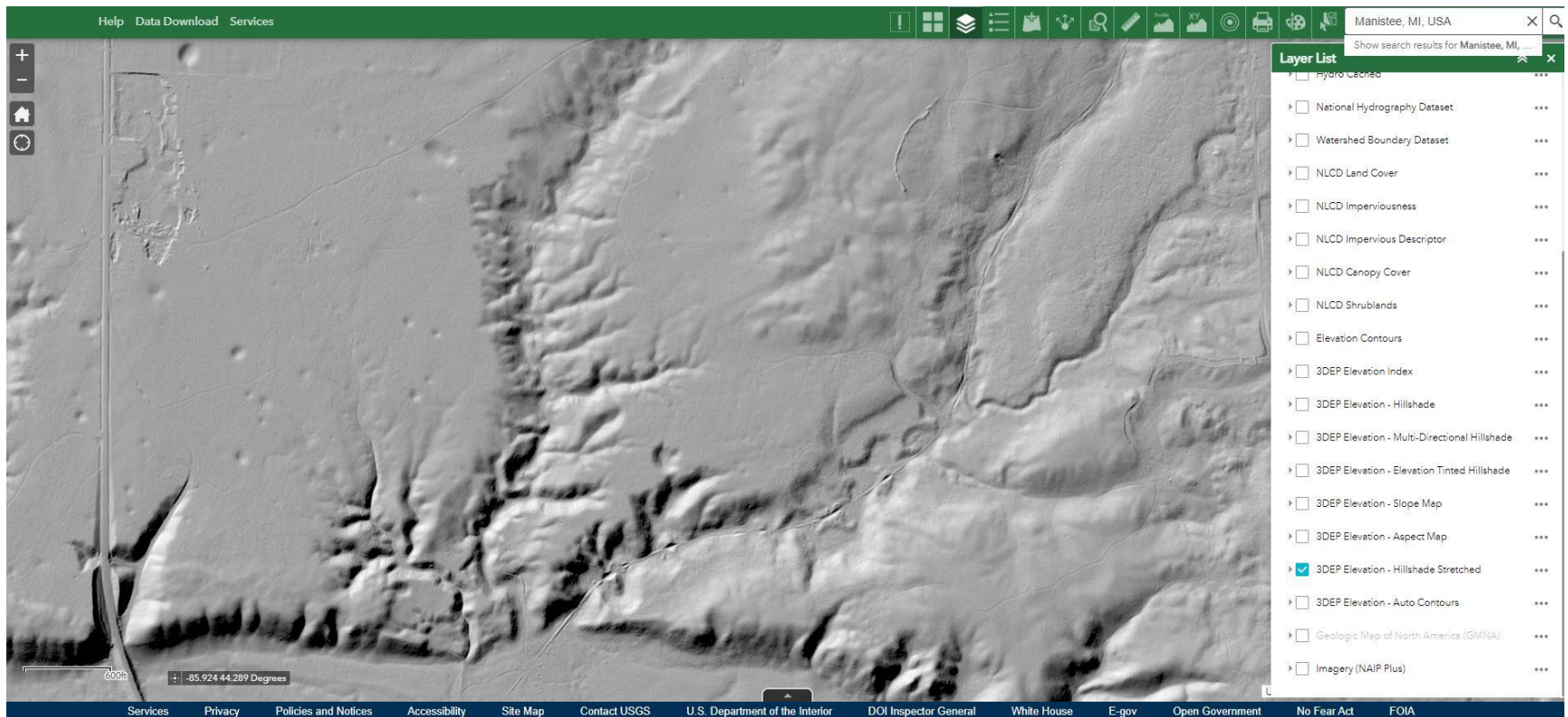


Zoom in

The Buckley & Douglas Grade becomes visible

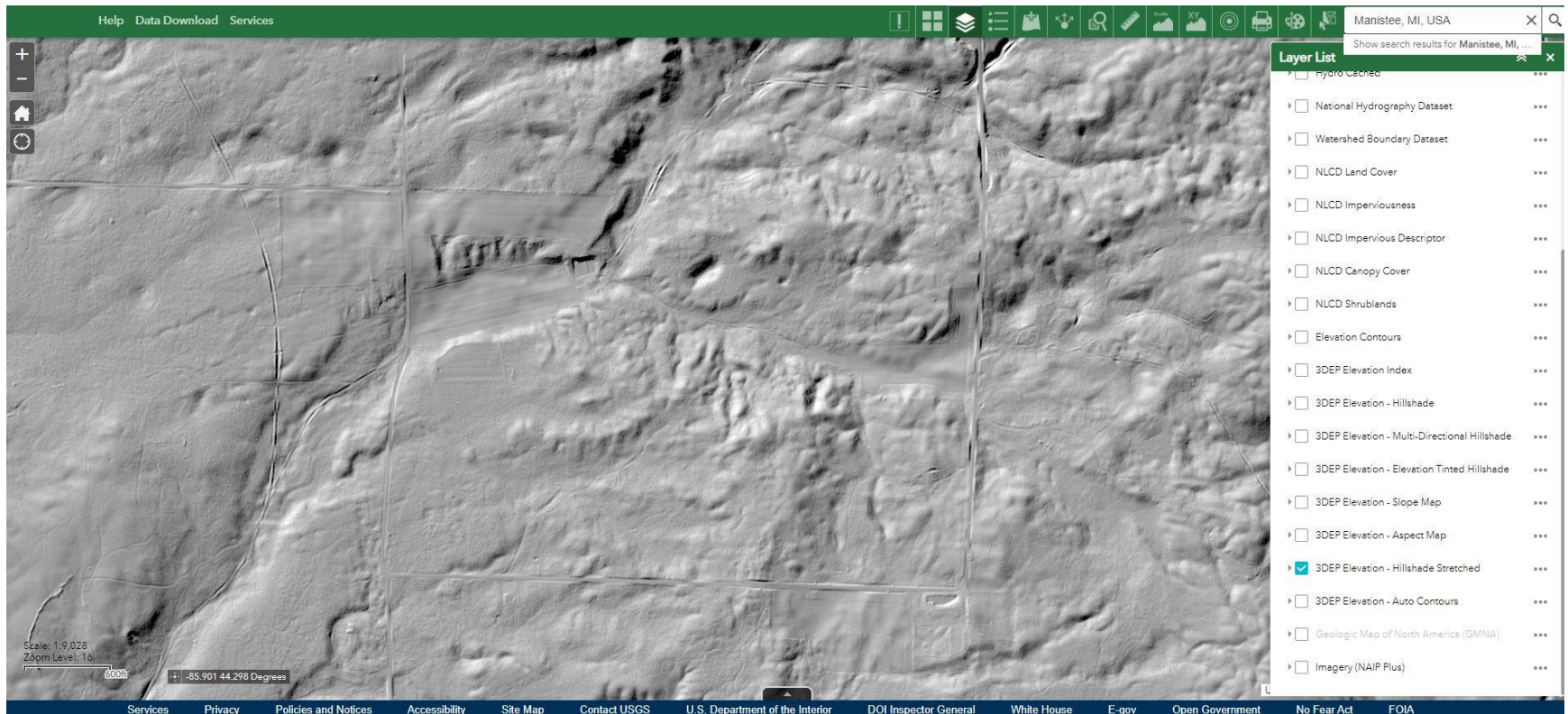


Move the image to follow the grade to the northeast using the left mouse button

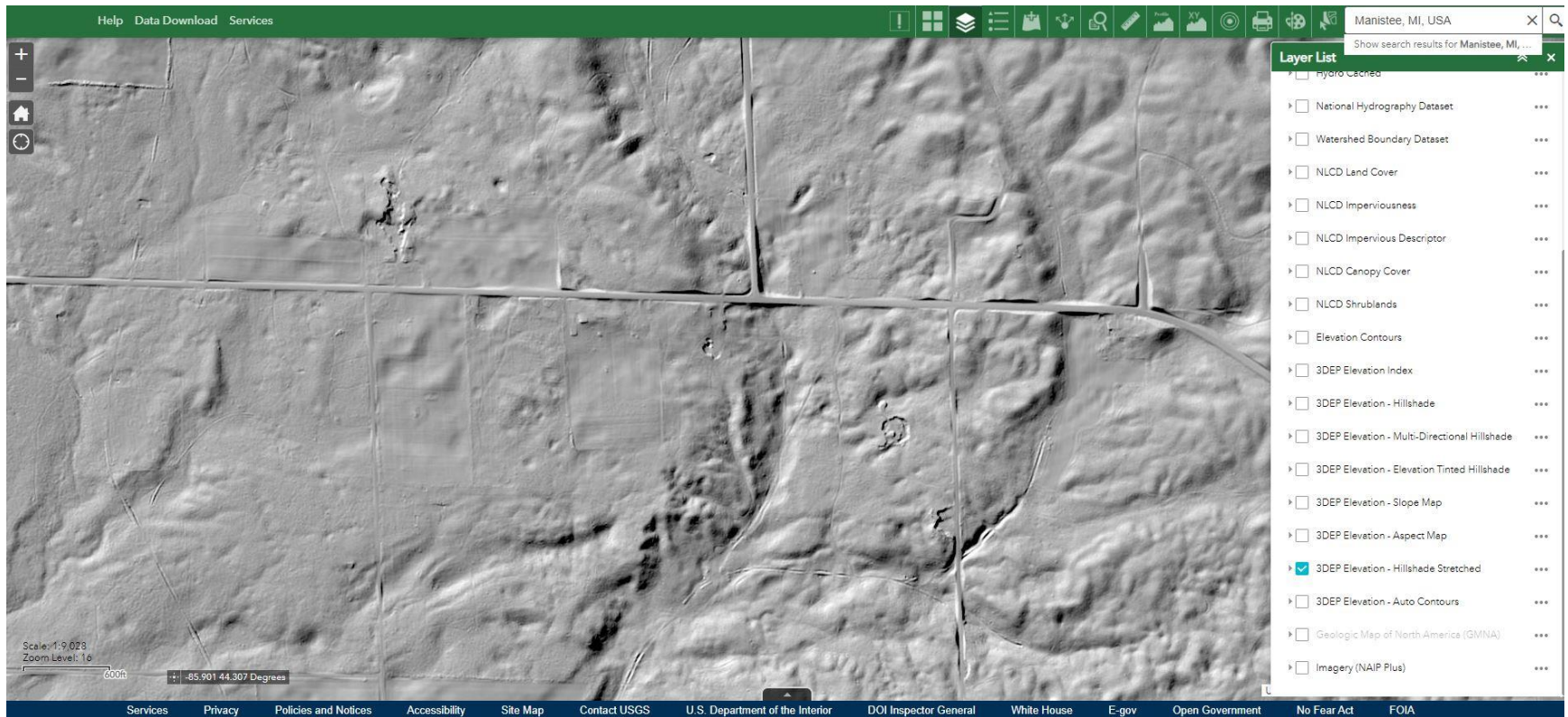


The view a bit farther north

Grade obscured in heavily farmed areas

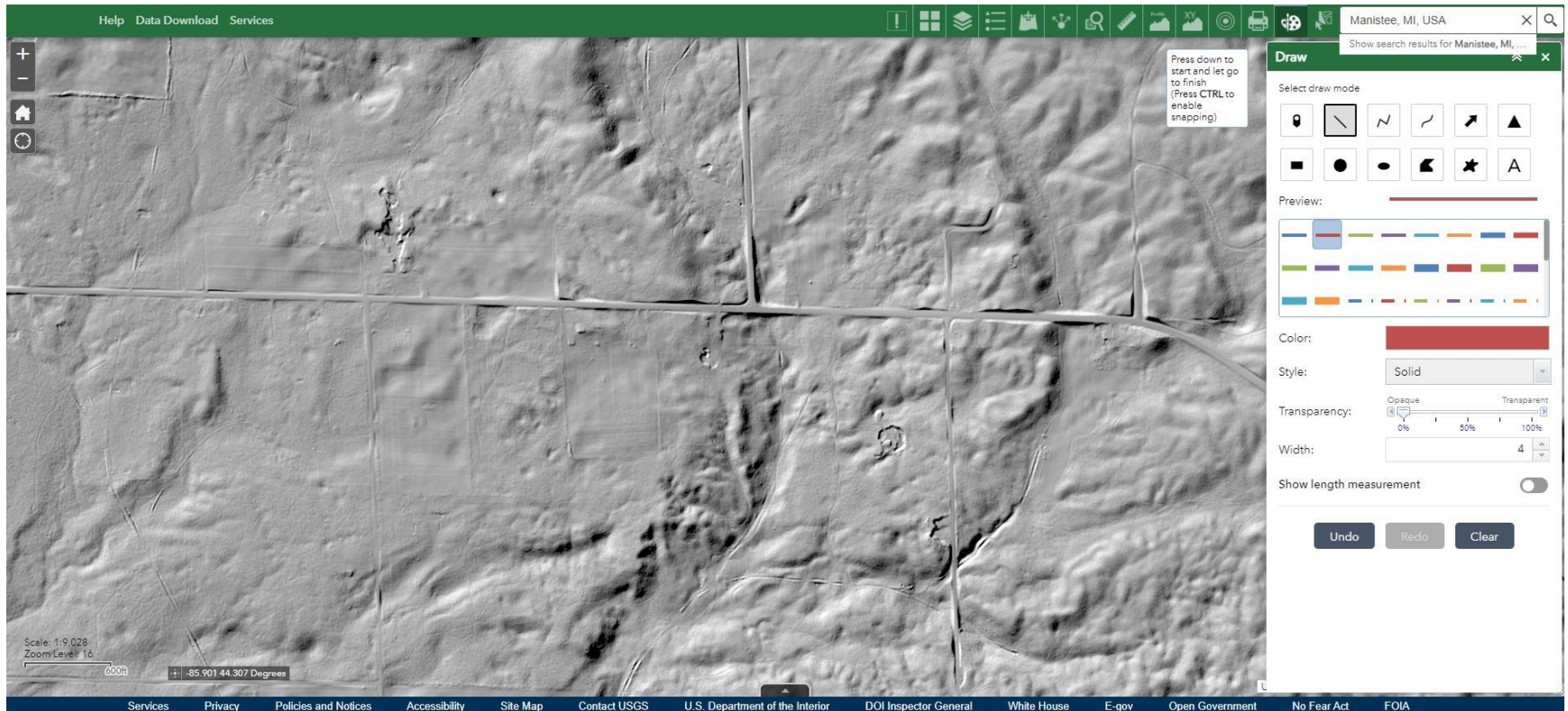


And yet farther north



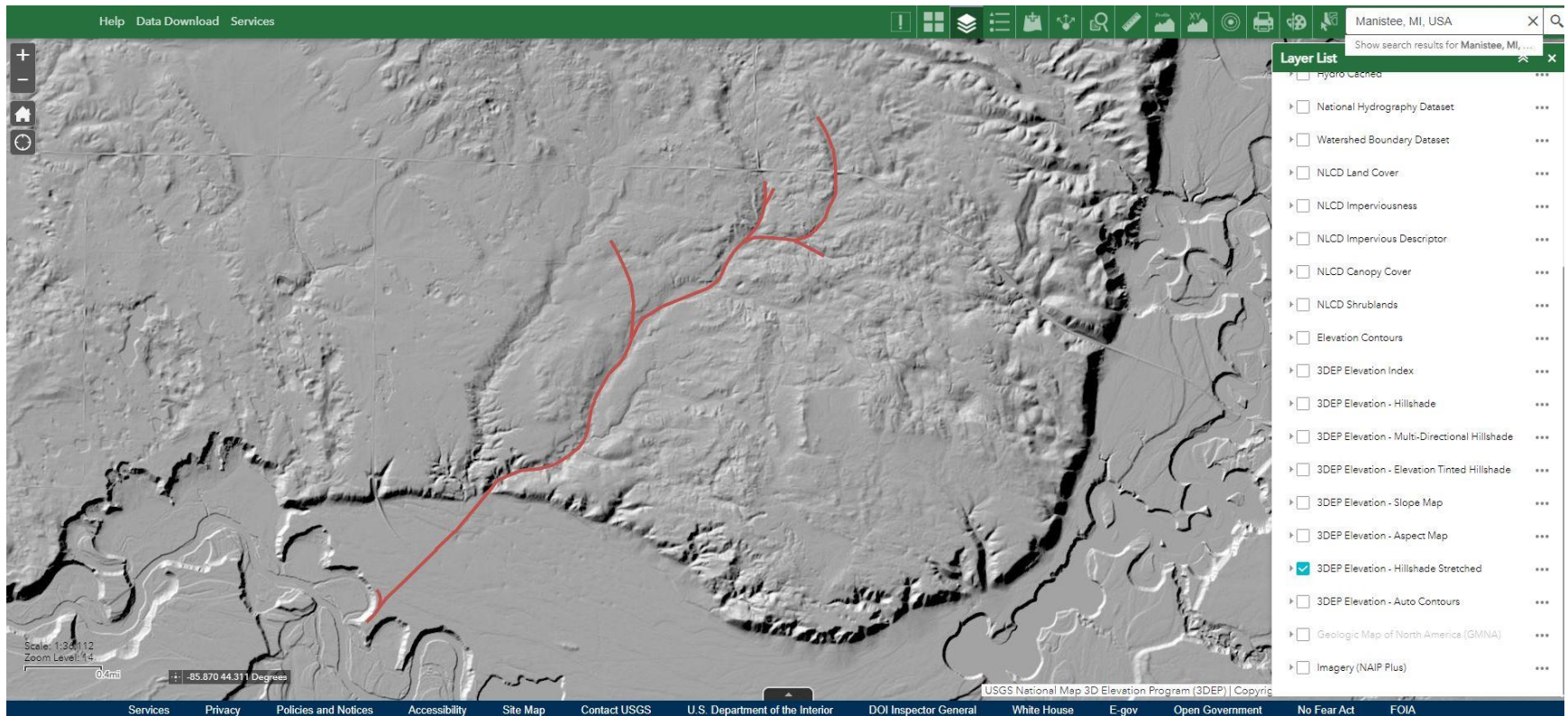
Click on the Palette icon to switch to the “Draw” menu

Hold down the left mouse button and drag the cursor along the grades

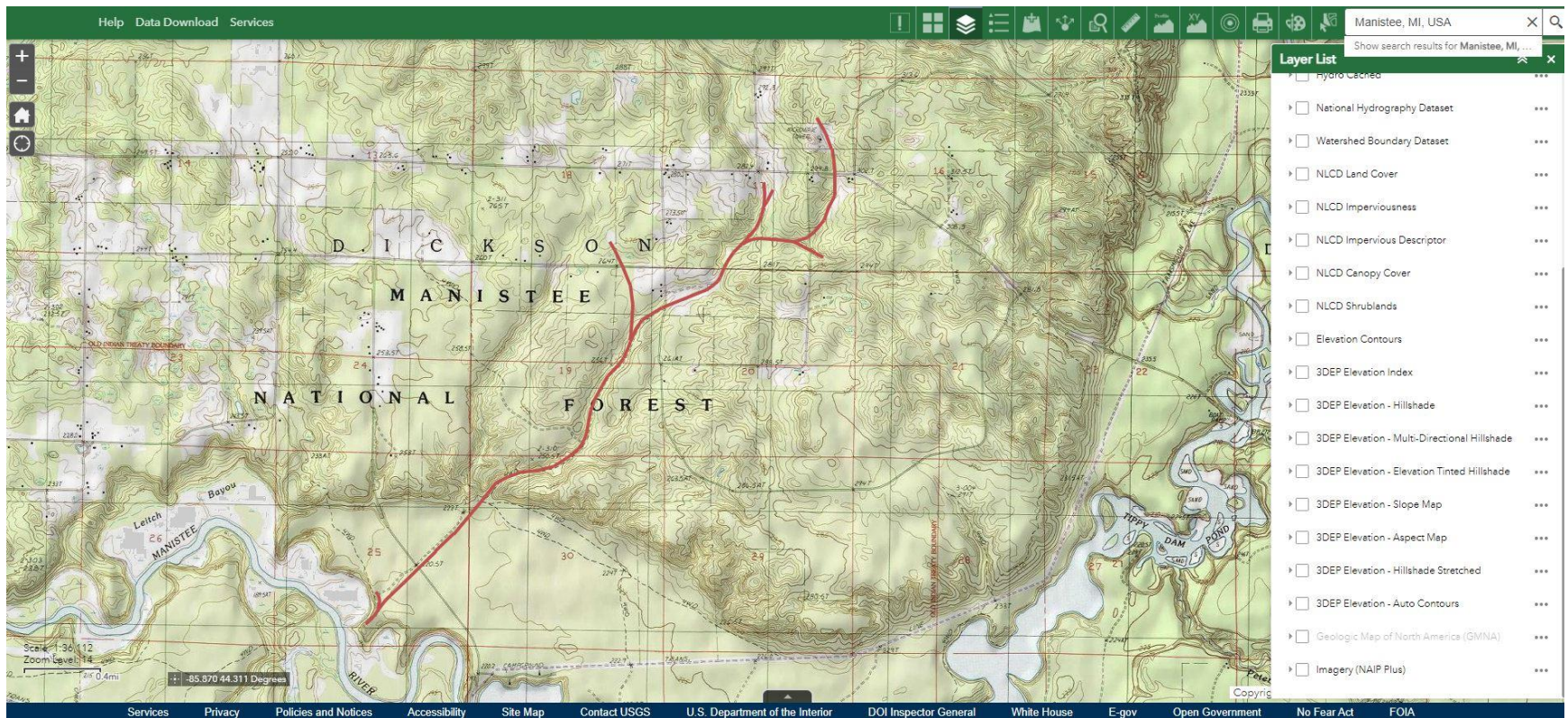


After tracing the grades, zoom out and then left click on the “Layer List” icon again

Next, uncheck the 3DEP Elevation-Hillshade Stretched box



The result can be saved as a screen shot



Another useful tool-for old aerial photographs of the entire USA: <https://earthexplorer.usgs.gov/>

Requires creation of login credentials
Using it is moderately complex
Provides high resolution images

The screenshot displays the USGS EarthExplorer web application. The top navigation bar includes the USGS logo and the text "science for a changing world". Below this, the "EarthExplorer" title is visible, along with links for "Help", "Feedback", and "Login".

The main interface is divided into two primary sections: a search criteria sidebar on the left and a map view on the right.

Search Criteria Sidebar:

- 1. Enter Search Criteria:** This section provides instructions on how to narrow the search area by entering an address, coordinates, or a place name. It also mentions that users can click the map to define their search area and view help documentation.
- Geocoder:** This section allows users to select a geocoding method (currently set to "Feature (GNIS)"). It includes a "Search Limits" note stating that the search result limit is 100 records and that users should select a Country, Feature Class, and/or Feature Type to reduce the chances of exceeding this limit. There are tabs for "US Features" and "World Features".
- Feature Name:** A text input field with a placeholder "(use % as wildcard)".
- State:** A dropdown menu currently set to "All".
- Feature Type:** A dropdown menu currently set to "All".
- Show / Clear:** Buttons to apply or reset the search criteria.
- Polygon / Circle / Predefined Area:** Radio buttons to select the search area type.
- Degree/Minute/Second / Decimal:** Radio buttons to select the coordinate format.
- No coordinates selected:** A message indicating that no coordinates have been entered.
- Use Map / Add Coordinate / Clear Coordinates:** Buttons to interact with the map or manage coordinates.
- Date Range:** A section with "Cloud Cover" and "Result Options" tabs. It includes a "Search from" and "to" date range input field.

Map View:

- Search Criteria Summary (Show):** A tab to view the current search criteria.
- Clear Search Criteria:** A button to reset the search.
- Map:** A high-resolution aerial photograph of the central United States, showing states like South Dakota, Nebraska, Iowa, and Wisconsin. Major cities such as Minneapolis, St. Paul, St. Cloud, and Des Moines are labeled. A coordinate box in the top right corner displays the current location: (45° 40' 31" N, 94° 03' 53" W).
- Legend:** A small legend is visible in the bottom left corner of the map area.

Useful websites for old maps

Specific for Michigan:

<https://michiganology.org/>

<https://quod.lib.umich.edu/m/micounty/>

Entire country

https://www.usgs.gov/programs/national-geospatial-program/historical-topographic-maps-preserving-past?qt-science_support_page_related_con=0%23qt-science_support_page_related_con

<http://alabamamaps.ua.edu/index.html>

<https://www.davidrumsey.com/view/atlasses>